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ROYAL COMMISSION OF INQUIRY INTO CERTAIN
DEATHS AT THE HOSPITAL FOR SICK CHILDREN AND
RELATED MATTERS.

Rowe: in Ch.

Hearing held in Court Room 20
Court House
361 University Avenue
Toronto, Ontario

The Honourable Mr. Justice S.G.M. Grange

Commissioner

P.S.A. Lamek, Q.C.

Counsel

E.A. Cronk

Associate Counsel

Thomas Millar

Administrator

Transcript of evidence
for

July 21st, 1983

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Court House, 361 University
Avenue, Toronto, Ontario, on
Thursday, the 21st day of July,
1983.

THE HONOURABLE MR. JUSTICE S.G.M. GRANGE - Commissioner
THOMAS MILLAR - Administrator
MURRAY R. ELLIOT - Registrar

APPEARANCES:

P.S.A. LAMEK, Q.C. Commission Counsel
T.C. MARSHALL, Q.C.) Counsel for the Attorney-
L. CECCHETTO) General and Solicitor
General of Ontario (Crown
Attorneys and Coroner's Office)
K.J. ROLAND) Counsel for The Hospital
R. BATTY) for Sick Children
M. THOMSON)
R. DEVINS)
D. YOUNG Counsel for The Metropolitan
Toronto Police
W.N. ORTVED Counsel for numerous Doctors
at The Hospital for Sick
Children
E. McINTYRE Counsel for the Registered
Nurses' Association of Ontario
and 35 Registered Nurses at
The Hospital for Sick Children



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APPEARANCES: (Continued)

H. SOLOMON)	Counsel for the Ontario
M. COHEN)	Association for Registered
	Nursing Assistants
W.A. BOGART	Counsel for Susan Nelles -
	Nurse
G.R. STRATHY)	Counsel for Phyllis Trayner -
P. RAE)	R.N.A.
B. JACKMAN	Counsel for Mrs. M. Christie -
	R.N.A.
S. LABOW	Counsel for Mr. & Mrs. Gosselin,
	Mr. & Mrs. Gionas, Mr. & Mrs.
	Inwood, Mr. & Mrs. Turner, Mr.
	& Mrs. Lutes and Mr. & Mrs.
	Murphy (parents of deceased
	children)
W.W. TOBIAS	Counsel for Mr. & Mrs. Hines,
	(parents of deceased child
	Jordan Hines).



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---Upon commencing at 10:00 a.m.

THE COMMISSIONER: Yes, Mr. Lamek.

MR. LAMEK: Thank you, sir.

May we have Dr. Rowe back, please.

DR. RICHARD DESMOND ROWE, Resumed

DIRECT-EXAMINATION BY MR. LAMEK: (Continued)

Q. Dr. Rowe, there are three more of the December deaths that we want to cover today if we can, and the first of them that I want to deal with this morning is that of Real Gosselin who was a three week old child. He had been referred to the Hospital for Sick Children from Winnipeg. He was admitted on December 17, 1980 and he died that night at 3:16 in the morning of December 18, 1980. He came to the Hospital for Sick Children with a diagnosis from the hospital in Winnipeg of congestive heart failure and what they thought to be an interrupted aortic arch. The child had undergone a cardiac catheterization in Winnipeg, had he not?

A. Yes, he had.

Q. Now, Doctor, we have on the easel a diagram which purports to depict the anatomy of Real Gosselin's heart. Can you tell us whether it does so with reasonable accuracy?



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A. There are some points I would like to make about it that may need to be corrected but the general features are consistent with that.

Q. Subject to anything that you think should be corrected, could you please describe the anatomy of that heart for us?

A. Yes. The prime problem in this heart was a left sided disorder which was at one end of the spectrum of hypoplastic left heart. The left ventricle is somewhat diminished. There is an abnormality of mitral valve and aortic valve that were not particularly severe, I believe, and the aortic arch was abnormal.

Essentially it was a hypoplastic or under-developed aorta and there was a very severe coarctation in the usual site. The diagram was made, and I am afraid does not quite accurately reflect the severity of the obstruction in the aortic area right opposite the mouth of the ductus arteriosus.

In the studies in Winnipeg, in fact they believed there was no passage of the contrast material that they injected into the ascending aorta to outline the aorta, they could not see anything going beyond this point here. They believed



1
2 that the aorta was completely obstructed at that
3 point but in fact our assessment of it was that it
4 was not interrupted but very severe coarctation.
5 I'm afraid this diagram does not quite put that
6 point through and if necessary and if it would be
7 preferred we can make that adjustment as we have
8 done with one other.

9 Q. Thank you, Doctor, that
10 would be helpful.

11 A. The ductus, however, was patent as
12 later was shown, but presumably this baby's condition
13 was precarious from birth because it is a ductal
14 dependent lesion. That is, once the ductus shuts
15 off then the obstruction would become extremely
16 severe and you may recall that in others if the
17 ductus is open there is a little bit of a bypass
18 around the mouth of the ductus for blood coming from
19 the ascending aorta to go to the descending aorta.
20 It can take a little dip into the mouth of the
21 ductus and then down here whereas once the ductus
22 arteriosus is shut the dimension of the aorta is
23 very markedly reduced. If you have a critically
24 severe obstruction as in this baby the ductus
25 is obviously of tremendous importance in the
functioning.



1
2
3 Nevertheless, in this situation the
4 likely course of events would be that blood would come
5 in in the usual way, be pumped out to the pulmonary
6 arteries, come back to the left side of the heart
7 and meet with minor resistance at these two valves,
8 a major problem being a relatively small left
9 ventricle, although not minute, and then a small
10 aorta here with obstruction up here, so there is
11 a situation induced in which this ventricle has to
12 pump against a high resistance and will fail fairly
13 quickly when that happens. If the obstruction is
14 very severe here, there is so little perfusion of
15 blood down to this part of the aorta and to other
16 important organs like the liver and kidneys and
17 bowel that the patient very quickly can deteriorate.

18 So it is the severe malformation
19 and unless something is done to try and alleviate
20 it death would inevitably occur. The consequences
21 of intervention surgically depend upon other
22 defects including the degree of smallness, as it
23 were, of this left pumping chamber but I think
24 one would consider this patient potentially
25 operable.

Q. Doctor, there were three
things on the chart, perhaps you would explain to me.



1
2
3 There is on the diagram in any event an atrial
4 septal defect which I do not think you mentioned. Is
5 that a part of the anatomy of the heart?

6 A. That is added there because
7 of the evidence I think in the catheterization study
8 of some shunting. I am not sure whether, I think
9 it was a foramen ovale defect in the autopsy so
10 at the trapdoor - in this situation the trapdoor
11 is often - at the atrial level, the trapdoor is
12 often stretched so that there is a defect created
13 so the trapdoor does not quite cover the bottom of
14 the normal aperture.

15 It is difficult to tell at cardiac
16 catheterization whether that is a true congenital
17 defect or whether it is a stretched opening.

18 Q. The second thing, Doctor,
19 the diagram appears to show some thickening of the
20 mitral aortic valves and you did refer to that. Is
21 there any particular significance to that? Is that
22 indeed what is being shown on the diagram?

23 A. Yes, indeed. The thickening
24 on the diagram for the aortic valve is meant to
25 draw attention to the fact that there are only two
leaflets to that valve which makes it very mildly
restrictive but not severely so. The other thickening



1
2
3 is just to draw attention to the fact that the
4 anterior leaflet of the mitral valve is abnormal.
5 We could not demonstrate it. It is just that
6 instead of it being attached by the strings that
7 I was talking about the other day to the papillary
8 muscles on each side here, it was directly attached
9 to the wall of the ventricle, so that it is an
10 abnormal valve and it might produce some influence
11 on the dynamics but nothing to the degree that one
12 would see from the severity of the coarctation itself.
13 The predominant lesion was the coarctation.

14 Q. The third feature that
15 strikes me, at least, in the diagram, Doctor, is
16 that the ductus arteriosus appears to be a much
17 more substantial vessel here than is it shown to be
18 on other diagrams?

19 A. Yes, I think that is part
20 of the problem of showing the severity of the
21 coarctation, I think that was done because it was
22 trying to illustrate the potential effect of
23 prostaglandins but I think that should be a smaller
24 size ductus and a much more severe narrowing opposite
25 the point in the aorta itself.

Q. Thank you. Doctor, we have
a very short hospital record to deal with, reflecting



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I suppose the brevity of the stay of the child.

THE COMMISSIONER: Do you want to
make the diagram an exhibit?

MR. LAMEK: Oh, yes, forgive me.

THE COMMISSIONER: Exhibit 88.

---EXHIBIT NO. 88: Heart Diagram of Real Gosselin.

THE WITNESS: Mr. Lamek, may I ask
if you want that diagram to be adjusted?

MR. LAMEK: I think it would be
helpful, Doctor, yes, thanks. Otherwise, looking
at it some months from now, and perhaps not recalling
what you said, we may get the wrong impression of
it. Thank you.

Q. Now, Dr. Rowe, this child
having undergone cardiac catheterization in Winnipeg
where as you have said the diagnosis was interrupted
aortic arch and the child having also been diagnosed
as having congestive heart failure in Winnipeg,
he was started on digoxin in Winnipeg, was he not?

A. Yes, he was.

Q. And indeed received digitalizing
doses in Winnipeg?

A. He did.

Q. At page 16 of the chart



1

2

there is a reference --

3

A. May I have a copy of the

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chart, Mr. Lamek?

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Q. Of course.

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Q. I find the page numbers are not very clear on this chart, Mr. Commissioner, but maybe one comes across one and can work from there. Page 16 is a copy of a page from the progress notes at the St. Boniface General Hospital in Winnipeg, the referring hospital. It appears from the foot of that page that on the 15th and 16th of December, 1980:

"Digitalizing doses of digoxin".
Were administered to Baby Gosselin, does it not?

A. Yes.

Q. Do you have any comment, Doctor, on the size of those digitalizing doses?

A. Yes. They are on the high side. We would probably give a somewhat lower amount.

Q. Could you give us some idea of the ---

A. Well, that works out as I calculate it at about 55 micrograms of digoxin per kilogram of body weight for a total digitalizing dose, given intravenously.

Q. Yes.

A. And we would probably give about 40. It is within the range of many hospital



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guidelines because there is a variation in the way this is handled from hospital to hospital. We have always traditionally had rather lower doses than most other units so we would say a lower dose if it came to us directly and other places might say well, we prefer a bigger amount.

Q. But in fact the digoxin level was taken in the blood of this child on the day of admission, was it not?

A. Yes.

Q. And at page 55 the level that is recorded is shown there. Again that is a very unclear number, Mr. Commissioner, I am afraid. Page 54 is not bad and if it is of any help it is seven pages from the back of the binder and it is a biochemistry report. From which it appears, does it not, Doctor, that the level recorded in a sample of this child's blood taken at 4:30 on December the 17th was 3.7 nanograms per millilitre?

A. Yes.

Q. And that in the order of the number you told us a couple of days ago would be seen reasonably as a warning flag in a child?

A. Yes.

Q. And that, Doctor, I take it



Rowe, dr.ex.
(Lamek)

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explains, does it not, the order on page 53, two pages further back, back towards the front of the chart, where the digoxin level is ordered on the 17th, Order No. 4 in the top order slip. That is page 53, Doctor, two pages back towards the front. The first order slip copied on that page shows Item 40 digoxin level and then turning over the page to page 54.

A. Yes.

Q. The third order slip on that page an order given at 7:25 in the evening of the 17th says: "Hold digoxin in the evening: tomorrow morning start digoxin .018 milligrams; before - don't start digoxin take dig again level in a.m."

So I take it there was a rather conservative approach to the level that had been recorded on the afternoon of this child's admission and presumably somebody wanted to have that level drop a little before continuing with the digoxin?

A. Yes.

Q. Is that a fair inference?

A. Yes, and they would be concerned that the nature of the malformation might aggravate this situation because of the cor profusion of the kidneys.



E.4 (DM.jc)

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Q And I won't ask you to find the page particularly, Doctor, with this poor numbering of the copies, but that order is reflected in the nursing notes, the progress notes at page 44 of the record for the 17th of December.

Now the child was admitted to Ward 4A, was he not, and in particular Room 418, and that appears ---

A. Yes, 4A.

Q Admitted to Room 418?

A. Yes.

Q As we said, he had undergone catheterization in Winnipeg where the diagnosis had been made. At the Hospital for Sick Children was that diagnosis of interrupted aortic heart either confirmed or accepted, or was there some measure of disagreement?

A. No. I think that was felt to be a reasonable diagnosis. I believe when the films were examined, and I am not sure at what point the films were examined, there was a conclusion that it wasn't a complete interruption, but it is a matter of degree and it was virtually talking about the same degree of functional problem.

Q It seems as I read the chart



B.5

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to have been concluded, I suppose on a sort of
sliding scale that it is not a total interruption but
a severe coarctation?

5

A. Yes, exactly.

6

Q. And it was also decided that

7

there was a patent ductus arteriosus, was it not?

8

A. I think that couldn't be

decided clinically.

9

Q. Yes.

10

A. But must have been evident on

11

the picture.

12

Q. Was it not inferred that that

13

ductus was indeed the major supply, the major source
of supply of blood to the lower body?

14

A. Yes, depending on how patent

15

it is.

16

Q. And it was therefore important

17

until something could be done with this child I take

18

it to keep the ductus open?

19

A. Yes.

20

Q. And was it for that reason that

prostaglandin was started?

21

A. Yes, that would be the reason.

22

Q. I take it that you were anxious,

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when I say you I mean your Division, was anxious to

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B.6

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resume the drug regimen that would help control the congestive heart failure of the child and get back on to the digoxin?

A. Yes.

Q. But unhappily that did not appear to be prudent in light of the level that was recorded on admission and we have seen what the orders were in respect of that?

A. Yes.

Q. Now, on page 44 of the record, Doctor, the second page of the progress notes, there is a note at the top of that page 17.12.80, 1900 hours, 7 o'clock in the evening, and does that appear to you, as it appears to me, to be the note of a physician?

A. Yes.

Q. It records he was called to see, presumably this patient, because of apnea?

A. Yes.

Q. Two episodes I believe?

A. Yes.

Q. And apnea is what, Doctor?

A. It is where the breathing stops.

Q. No breathing?

A. No breathing.



B.7

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Q And the colour is, what is that,

3

is that "D"?

4

A I can't read that.

5

Q A rather cryptic signal, if it

6

is a "D" it may be short for dusky or something of
that sort?

7

A Yes.

8

Q He records bradycardia.

9

A Yes.

10

Q And appears to order that the

11

heart rate be monitored?

12

A Yes.

13

Q Monitor heart rate does that say?

14

A Yes.

15

Q It appears to me to say that
anyway.

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A Yes.

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EMB.jc
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Q Now, at the bottom of the page,
at the top of the next I'm afraid is an utterly
illegible entry. But on the top of page 45, second
line, there is one word that sort of comes out of that
very faint copy and that is "vomited". Do you see that?

A. Yes.

Q I don't know whether you are
better able to read that awful copy than I am, Doctor.
I confess that is the only word that comes very
clearly to me.

A. I think this is a comment - I
take it that paragraph starts with the word "Nutrition"
and this would be a nursing note about the feeding.

Q. Yes.

A. And something around "patient
became more drowsy, fed more poorly".

Q. Yes.

A. "Fed ... ".

Q. Is that 60 cc's?

A. " ... 60 cc's at ... " something
or other hours "vomited".

Q I don't know whether that is
30 or 80 cc's.

A. Yes.

Q. It wouldn't be 80, would it,



C.2

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it would only be taken in 60?

3

A. Yes. I'm not sure. Probably

4

30, yes.

5

Q. But at least it appears that

6

some time in the evening of the 17th, in addition to
the two episodes of apneic there had been an episode
of vomiting?

8

A. Yes.

9

Q. And the note at 2220 which

10

follows it, which again appears to be a note of a
physician I think:

11

12

"Lasix has been administered",

13

and it appears 102 cc's, and it appears, does it not,
that the lasix is doing its diuretic work?

14

A. Yes, looked to have been helpful.

15

Q. At the end of that note:

16

"Stable for present but require

17

relatively urgent operative inter-
vention."

18

19

A. Yes.

20

Q. Now, on the next page of the

21

progress report, Doctor, on the lower half of the page
first, we have Nurse Nelles' notes for the period

22

from 7 o'clock in the evening until 2 o'clock in the

23

morning of December 18th. Perhaps you could just take

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a moment to go over those. Nutrition, baby was taking nothing by mouth in any event, by Dr. Stephen's order, taking glucose intravenously, is that it?

A. With added potassium.

Q. Potassium, yes. And prostaglandin was also being infused?

A. Yes.

Q. Very noticeable edema in the feet and abdomen also. Somewhat distended, and I take it again indicative of congestive heart failure?

A. Yes, that would be consistent with that.

Q. Vital signs apex regular and staying at 120 a minute?

A. Yes.

Q. Respirations appear shallow at times and although apneic monitor did not alarm, babe continued to have periods of irregular breathing. Blood pressure lower in upper extremities, 124/130 in right arm. Is that in right arm or room air?

A. Room air.

Q. Room air.

A. No, no, I'm sorry.

Q. It is right arm, isn't it?

A. Right arm, yes, it is.



C.4

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Q. You see the same abbreviation
for both things, don't you?

4

A. Yes, you do.

5

Q. As opposed to 170 over 148
earlier in the day, continues to be no blood pressure
in right leg, although - what's that?

7

A. Popliteal.

8

Q. Popliteal pulse?

9

A. Yes, popliteal pulse is audible.

10

Q. Is audible with a Doppler.

11

Colour appears unchanged in or out of oxygen - I'm
not sure what that is - discontinue oxygen on
Dr.Stephen's suggestion and parents were in to visit
in the evening.

14

Now, that is the note of this child
until 2 o'clock in the morning. Can we then go back
to the previous page, please.

17

At the bottom of the previous page
there is a note at 3:30 a.m. Do you recognize the
handwriting on that note, Doctor?

19

A. Yes.

20

Q. Is that Dr. Rose's handwriting?

21

A. Vera Rose, yes.

22

Q. And she is a Staff Cardiologist

23

at the Hospital?

24

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C.5

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A. She is a Staff Cardiologist
in the Division.

Q. Yes. She records that at 3:30
in the morning - well, she records at 3:30 in the
morning that she was called about the child's cardiac
arrest at 2:50, arrived at 3:20. I take that Dr. Vera
Rose was not required to be in the Hospital at that
time of night?

A. No.

Q. But she was on call and was
summoned and obviously came?

A. That's right.

Q. And resuscitation had been
continued for 45 minutes of no avail. Baby had been
on IV - what does PGE mean, please?

A. Prostaglandins.

Q. Prostaglandins, thank you.

A. It is PG which is the
prostaglandins and E-1 is the particular variety of
prostaglandin.

Q. Thank you. Some apneic ...

A. Some apneic spells.

Q. Apneic spells, thank you, were
recorded earlier, no bradycardia. Prostaglandin was
continued because of risk of ductal closure?



C.6

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A. Yes.

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Q. Thank you. Digoxin had been held yesterday in the morning and in the evening because of level of 3.9, surgery was planned for today.

And then in the tiny writing in the bottom corner "explanation from ... "?

A. "Explanation given to the parents".

Q. Oh, to the parents, thank you. Some consent for autopsy?

A. Consent for autopsy, yes.

Q. All right. I had a little trouble with that.

Now then, on the top of the next page is the arrest note written by Dr. Mount Stephen, there is an associate's note re a No. 25, a Code 25. He called at 2:30 in the morning, he arrived to find the baby was being bagged.

Can you tell us please, explain that for us. I am sure that is not nearly as sinister as it sounds?

A. No. It means that there is a mask with oxygen flowing and placed over the face and there is hand ventilation with the balloon attached to the mask.



C.7

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Q And external cardiac massage is being done. Baby had no heartbeat, used sodium bicarbonate, adrenalin and sodium, what's that, gluconate?

A. Calcium gluconate.

Q Calcium gluconate, sorry, yes, it is calcium gluconate.

A. Isuprel.

Q Isuprel also given, no electrical response, four to five minutes into the arrest, no electrical activity, pupils fixed and dilated, no output and CPR was stopped and the baby was pronounced dead at 3:16 in the morning.

The note is, from Rose, "See note on other side of page", which I believe to be the one we read at the bottom of the preceding page?

A. Yes.

Q That surgery had been planned for December the 18th.

Now, it hardly needs to be said, Doctor, but we do once again have, do we not, an apparently sudden onset of these terminal events and a very rapid and irreversible course of them?

A. Yes.

Q Arrhythmias that cannot be resolved and the baby dies.



C.8

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Now, is the death and the time of death and the manner of death of this child consistent with his anatomy, his clinical condition, in your view?

A. Yes, very much so.

Q. Were the levels from the digitalizing doses in Winnipeg sufficient in your view to produce extreme toxic symptoms in this child?

A. No.

Q. I take it that the terminal symptoms and their course and onset are again consistent with digoxin intoxication, however?

A. Yes.

Q. Did any cardiologist or Cardiac Fellow or any physician to your knowledge raise any question about the cause of this death?

A. I think there were concerns about the suddenness of the deterioration and that was expressed by one or two people.

I am not personally concerned about the explanation because this, in my view, was a very severe coarctation.

The baby had, as I gathered, developed worsening of the failure during the evening from about 9 o'clock onwards and although there had been an initial response by diuresis, that simply



C.9

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demonstrates that we were skating on very thin ice
with this baby and I think that I would ascribe
progressive deterioration and failure to that.

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The question that other people had
raised was that relating to prostaglandins.

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Q. Yes.

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A. Because there had been periods
of apneic and there was some discussion I think in
our conference about that point, whether or not this
baby's death might have been induced by the
prostaglandins.

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Prostaglandins have an effect on the central nervous system of producing apnea and it is a known complication of the administration of the drug. When it occurs, what is usually done is that the dose of the drug is reduced. In this situation the judgment was apparently made to continue at the same level of the drug because of the concern that there was not a good effect evident from the prostaglandin in opening up the ductus. The evidence for that I think was revealed in the nursing notes on page 57 - would it be - a flow sheet called Flow Sheet 3.

Q. 57 should be almost at the very end of the book - five pages from the back - Flow Sheet 3. The date in the top corner 17-12-80?

A. That is the one.

Q. Thank you.

A. That is the flow sheet that describes the initial effect of prostaglandins infusion, and the effect is of course partially studied by the response of the baby. If the baby seems to get better then that means we are doing the job, so that the quickest way is to just feel the femoral pulses and if the femoral pulses come brisk within an hour or two of the infusion, then you know that you have relieved the obstruction to some degree.



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In this particular baby there is no note here about the femoral pulses. There are comments in the nurses' notes I think about the blood pressure but the blood pressures are recorded specifically for this purpose here. I think that was a medical order. I think you see that the blood pressure was 174 in the arm and 70 in the leg before the infusion started, and an hour afterwards it was 166 and 60 respectively for those two positions.

Q. I am not sure I am following these numbers, Doctor. The 174 and 70, the notation in the right margin, is before prostaglandins --

A. Yes.

Q. Thank you.

A. And then one hour later, or after the infusion is started, there is a blood pressure in the arm of 166 and in the leg of 60. The result that you would hope for would be that the blood pressure in the arm would come down somewhat and the blood pressure in the leg would go up.

Q. I see. They both came down.

A. The change there is not significant. Then 2-1/2 hours later the blood pressure is 158 in the arm and 64 in the leg and we expect to see somewhat - or we would hope to see



D.3

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2 somewhat better result than that. The difficulty
3 here is that the baby is three weeks old and the
4 ductus arteriosus is not quite so amenable to
5 manipulation with prostaglandins as you progress with
6 age in the neonatal period.

7 I don't know what decision was in
8 the mind of the resident but one can guess that a
9 reasonable decision was that they are going to have
10 to persist with it although the results don't look
11 terribly good at the moment. When apnea came around
12 they must have discussed the question of dropping or
13 not the dose and probably decided that they should
14 continue. I do not have a good feel in the notes
15 for what those discussions may have been, of course, but
16 I think that would be the way that most of us would
17 have managed it.

18 Q. So the question that was raised,
19 if I understand you, was whether the prostaglandin
20 may have played some part?

21 A. Whether there might have been
22 a major effect of prostaglandins on the the breathing
23 again or in some way affected the situation. There
24 was some subsequent correspondence about that.

25 Q. Where would I find that?

A. I think Dr. Freedom wrote to
Dr. Gordon Cumming of Winnipeg.



D.4

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Q That is not part of this record.

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A I think this was a note that

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he sent to accompany the discharge report. Our

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custom is that when the discharge report is printed

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at the Hospital, for the Hospital record, it is sent

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to the HSC referring doctor, and he then writes a

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covering letter to the doctor outside, with the

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discharge report. It is a sort of a more personal

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thing that he does, to add any other comments that he
might have.

11

Q I have seen references in those

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covering letters to an enclosed summary. I have

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never been sure what the enclosed summary was. Now, I know

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what the enclosed summary is, but we do not have the

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reporting letter.

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A No.

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Q How was that question resolved

18

as to the possible involvement of the prostaglandins?

19

A The discussions that we held

20

which included the contribution of Dr. Peter Olley, who

21

is the world prostaglandins expert in our midst

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were that he did not think that the apnea was likely

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to cause the death, from prostaglandins.

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I believe that Dr. Cumming in Winnipeg

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had other thoughts about that. He felt that in his experience a possibility of death in a baby of this sort on prostaglandins might be that the ductus opens up quite abruptly after a period of time and allows a complete flooding of the lungs, just like Niagara Falls entering the pulmonary circuit, in a sudden fashion that would, in a baby who had a relatively small left heart, might create acute distress and death.

It is still a debatable issue, I do not know that anyone can be sure. But at least there was a lot of discussion about that point.

The other discussion we had of course was over the question of the timing of surgery, whether there was any possibility that an earlier intervention surgically might have changed the picture.

Q. Certainly you had not had much opportunity for that. The child had only been admitted what - the early afternoon of the 17th?

A. The child was admitted at 3 o'clock in the morning.

Q. Oh, the morning of the 17th - sorry.

A. Of the 17th.

Q. And was there therefore for 24 hours?



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A. Yes. So there were some questions that we addressed there and in fact that is the reason that this baby is put in the category I put the baby in for the January meeting. There was a question about whether something else might have been possible. Now, we do not know whether it would or not, but that was the question that was asked.

Q. Something you said a little earlier interested me, Doctor. I believe you said that the baby's condition, and I think you referred specifically to the heart failure, in your view got worse from about 9 o'clock on.

Can I ask you please, from what you draw that conclusion?

A. I drew that conclusion from the resident's note. It was not my conclusion because I did not see the baby.

Q. The resident's note at --

A. On the 17th at 1900 hours.

Q. At 7 o'clock. Yes.

A. That was when there had been periods of apnea and bradycardia and the liver, he makes a note that the liver size has gone up to 5 to 6 centimetres and I think there was - I am not sure what other thing there, but the edema had not changed



D.7

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but the liver size had increased. I think that that is the reason why he ordered lasix immediately so that I think his conclusion would have to be that the baby's failure was worse, and I would agree with that, at that time.

7

Q. At that time. That was at 7 o'clock?

8

A. Yes.

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Q. Do you attach any significance to what is reported by Nurse Nelles in her note covering the period from 7 o'clock until 2 a.m.? As you say, they do not appear to have been observed by her any heartbeat irregularities.

14

A. No.

15

Q. And there was some irregular breathing in periods, she said.

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A. Yes. Well, she would not be palpating the size of the liver, that is not a nursing function. I think I have referred to that before as being one of the more subtle things that happens under your eyes.

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Q. At 10 o'clock the same resident, as we have noticed already on page 45, at 10:20 has recorded 102 cc's voided which we agree seemed to be indicative of the lasix doing its work but the liver



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is now less distended, 2 to 3 centimetres below costal margin and his note at 10:20 is that the baby appears for the present to be stable.

5

A. Yes.

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Q. And so the condition at 7 o'clock does not appear to have been the condition three hours later?

8

A. No, because of the diuretic.

9

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Q. Because of the diuretic some improvement has been achieved?

11

A. Yes.

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Q. Then between 10:20 and 2:50, in the space of an hour and a half, is it your opinion or suggestion that this baby's condition worsened again so dramatically that at 2:50 in the morning the child arrested?

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A. I think that is perfectly possible. I have no evidence of that, but the baby was very sick with a very severe malformation and I think that could happen perfectly easily.

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Q. You will agree with me, Doctor, one cannot read the observations of the resident in the 7 o'clock note without taking into account the observations in the 10:20 note also?

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A. No.



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Q. We come now, Doctor, to the second last of the on-ward deaths in 1980, that of Stephanie Lombardo, who died at 4:20 in the morning of December 23, 1980.

A. Yes.

Q. We now have on the easel a diagram that I understand shows the anatomy of the child's heart. Can you confirm to me that it does indeed do that?

A. Yes, that one does reflect --

MR. LAMEK: Good. May that be the next exhibit, please, Mr. Commissioner?

THE COMMISSIONER: Exhibit 89.

--- EXHIBIT NO. 89: Heart Diagram of Stephanie Lombardo.

MR. LAMEK: Q. Would you describe, please, Doctor, the anatomy of that heart and its anomalies, some of which I confess are apparent even to me.



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A. This girl had a condition which is tetralogy of Fallot. You will recall from the others that the principle components of that malformation of the heart are there is a large ventricle septal defect between the two pumping chambers. There is a variable degree of obstruction to blood going out to the lung or pulmonary stenosis. That can range from very mild to complete occlusion of the vessel going out to the lung, so called pulmonary atresia.

In this case there was severe obstruction but it was, the aperture was patent, there was no complete obstruction. There was severe infundibular stenosis, and most importantly there was an extremely small main pulmonary artery and pulmonary branches. I think the diagram is especially drawn to try and reflect that, it is a bit difficult to do. There is normally some discrepancy in tetralogy of Fallot between the size of the aorta and the pulmonary artery. What decides the size of the pulmonary artery is the amount of blood that is going through there during its development. If very little blood can get out there, then this vessel tends to be very small. If a fair amount of blood is going out to the lung



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2 then you get a slight reduction in the size of the
3 vessel but not very much.

4 So here there was a marked reduction
5 in size of-the whole of the length of the pulmonary
6 artery and its branches. We can perhaps come to that
7 in terms of what was done surgically, but I have
8 placed in here a small dotted circle which
9 represents the operative intervention, and we may
10 come back to that if you wish.

11 Q. Perhaps you could describe
12 it now, Doctor, that would be fine.

13 A. The operation that was
14 recommended here was something that would increase
15 the amount of blood going to the lungs. So that
16 this obstruction was bypassed, that is blood coming
17 into the heart here, since very little goes out that
18 way, and most of it went out this way, had to somehow
19 or other be put back inside the pulmonary artery in
20 order for the degree of oxygen in the blood to rise.

21 The usual procedure for this is a
22 Blalock-Taussig operation, which I have referred to
23 before, which employs the subclavian artery on one
24 or other side and brings it down, after transection,
25 so that it is anastomosed to the common artery.
It is usually done to a pulmonary artery branch.



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There are other forms of that operation that modify, Blalock-Taussig operations in which a piece of material which is properly known as gortex, g-o-r-t-e-x, is inserted between either the subclavian artery and the pulmonary artery, or somewhere else in the pulmonary artery, somewhere else from the aorta to the pulmonary artery in order to increase the size and the amount of blood going through to the lungs.

In this baby that was the original intention at operation I understand. But because the diameter of this vessel was too small it was not possible to place a gortex shunt. Furthermore, it was not possible to anastomosed the subclavian artery because this vessel was even smaller here than it is down here and it was not possible to do that and produce an effective shunt, which created a bit of a surgical dilemma. In the end the surgeon decided to open the back end of the pulmonary artery and try and make an incision in the front end of the aorta and join those two vessels together locally. This is a procedure that they don't particularly like to do if they can avoid it, because it it at high risk of the anastomosed being ineffective, but that was all that could be done. So that was the



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operation that was eventually conducted and that is what that little circle is meant to represent.

Q. Thank you. Now, Dr. Rowe, once again trying to get a capsule overview of this baby's course in the hospital and therefore referring primarily to the Discharge Report at page 18 of the Hospital record. It appears that the child was born on December the 13th at Northwestern General Hospital and was admitted that day to the Hospital for Sick Children.

A. Yes.

Q. She had been observed to be cyanosed and it was suspected that she might have some congenital heart defect. She was admitted was she not to Ward 7G?

A. Yes.

Q. Is that the Neonatal ICU?

A. That is the Neonatal ICU.

Q. Two days later a cardiac catheterization was performed upon her. That is to say on December the 15th and she was found to have a defect, the defect you have described, the tetralogy of Fallot and severe pulmonary stenosis. You have told us about those problems.

She was a candidate for surgery and



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two days after the catheterization, that is to say on December the 17th, she had an operation to provide the shunt, not to provide it but which did provide the shunt that you have described.

A. Yes.

Q. And is it fair that she tolerated the surgery reasonably well?

A. Yes.

Q. She went from the operating room to the ICU and she remained there for five days, and overall is it fair to characterize her stay there as essentially uneventful?

A. I think that may not be quite true.

Q. All right.

A. There was a problem with the colour of the patient and the oxygenation of the blood there and they were worried about the murmur.

Q. And the adequacy of the shunt.

A. And the adequacy of the shunt, yes. But that was the main concern, the baby's general condition wasn't bad.

Q. We can come back and look at those particulars, Doctor, and we will.

A. Yes.



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Q. On December the 22nd she was transferred to the cardiology ward and there she appeared to continue to make a good recovery from the surgery. Again subject to the concerns of the kind you have mentioned. She was still slightly cyanotic, did she not appear otherwise to be doing reasonably well?

A. Yes.

Q. She had been treated with Heparin, that is an anticoagulant, is it not?

A. Yes, it is.

Q. And designed to guard against blockage of the shunt?

A. Yes.

Q. That is the purpose of the administration of that?

A. Yes.

Q. But she was receiving no other medications, was she?

A. No, no other medications.

Q. And in particular she had never been on digoxin, had she?

A. Never been on digoxin.

Q. Now let's go - she was transferred to Ward 4A on December the 22nd,



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something like 11:15 in the morning, and a little over 12 hours later, 3:45 in the morning of December the 23rd she suffered, did she not, a cardiac arrest and could not be resuscitated and she died?

A. Yes.

Q. And permission for autopsy of this child was not given, was it?

A. No, it was not given.

Q. Subject to the qualifications that we want to discuss, Doctor, is that a fair overall summary of the major events over the course of this baby in the Hospital?

A. Yes.

Q. Perhaps we can go to the matters that you addressed and indeed to any others that you think are significant and should be considered in trying to arrive at an understanding of how this child died just when she did?

A. Yes.

Q. And understanding the manner of her death.

A. Yes.

Q. Could you take us to those parts of the chart, Doctor, that are important in your view for that purpose?



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A. It is not very legible on
page 37, there is a note at the bottom signed by
Dr. Burns.

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Q. Yes.

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A. The PO₂ is ranging in a
reasonable area, that is the oxygen, but there is
only a systolic murmur. The noise, as I have said
in the past that is produced by for doctors to
hear osculation are not produced for that reason
obviously, what occurs after an operation, is that
of a continuous murmur, a machinery type murmur,
and we listen very careful for that at the beginning,
especially when there is a concern about the adequacy
of the shunt. So there were some discordances
about, that the oxygen tension was reasonable but
the murmur was not continuous.

17

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Q. Dr. Jedeikin makes the
same observation on the 19th of December, does he not
on the next page?

19

A. Yes.

20

Q. Page 38.

21

A. Yes.

22

Q. Murmur only systolic.

23

A. Yes. The oxygen tension would
have been influenced by the fact that the baby was

24

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2 in a concentration of oxygen that was 40 per cent
3 surrounding its head, and therefore, although the
4 baby seemed to be getting ready where Dr. Jedeikin
5 and others would have been suggesting the baby
6 could go up to the ward, there was some concern
7 being expressed at that stage about the size of the
8 shunt.

9 Q. Yes. Doctor, can I ask you
10 one thing about that note of Dr. Jedeikin's on the
11 19th. Do you have any comment on the observation
12 two-thirds of the way through that note:

13 "Child's colour and PO₂ increased,
14 improved, so one must assume
15 reasonable shunt function."

16 A. I think that that doesn't
17 necessarily follow in the high oxygen concentration,
18 it is better than it was before operation, obviously.

19 Q. Yes.

20 A. But it would still be a
21 concern that if you didn't have the good murmur
22 that you are running the risk that you are sitting
23 on something that might get worse quite abruptly.
24 I think that was the concern expressed on the next
25 page basically by Dr. Burns. I think this point
was discussed subsequently in more detail but it



E10

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3 says there in Item No. 4 that the matter was
4 discussed with Dr. Izukawa and Trusler over the
5 need for repeat shunt after the oxygen was measured
6 in room air. So Dr. Burns, a pediatric cardiologist
7 and an intensivist in training was obviously not
8 entirely happy about the status there and worried
9 that although the situation hadn't deteriorated in
10 any way that that might be the possibility.

Q. Yes.

11 A. She was always concerned about
12 the hemoglobin in this baby. The hemoglobin was only
13 I think 11 grams or something like that and she
14 felt that in somebody who is marginal then the
15 hemoglobin should perhaps be brought up to a higher
16 level. Those are the only comments on looking at
17 that date.

18 Q. The note on page 39 by Dr. Burns,
19 Dr. Rowe, lists those five items as "needs" which I
20 take it those are things that she proposed to do.
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A. I don't know whether she had proposed to do them herself or whether she was just writing down what she thought should be done.

Q. Do you know whether there was any discussion with Drs. Izukawa and Trusler about the need for repeating the shunt?

A. Yes, yes I know there was.

Q. And what was the outcome of that discussion?

A. I think, from what I can gather, Dr. Trusler emphasized that the pulmonary arteries were so small that he was very concerned that any attempt to try and put anything further, do anything further to the pulmonary artery would not be successful and he felt that the best hope - I gather that he felt the best hope for this baby was to continue with this marginal shunt and keep the heparin going to make every possibility for it to continue and hopefully that over time, as the baby grew, it might get bigger.

But I think everyone was quite concerned about the potential of that shunt.

Q. Is there anything else in the chart, Doctor, that you think we should have firmly in mind when considering this child's death?



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A. Well, apropos of the use of
heparin, there are comments somewhere in here about
the tests which are used to determine the effectiveness
of heparin, showed values all over the place. I
think there are comments somewhere, I can't recall
where I saw it.

7

Q. Yes, certainly in here.

8

A. The use of this drug in
children and in babies is very difficult. To get
a stabilization with heparin, heparinization is
quite difficult and we often have that problem,
but sometimes it is more obvious, I mean, it is
more striking in some babies than in others. But there
seems to have been a comment that is made there and
I think that would cause me a little concern too,
that that was not helping matters, if you like.

16

Q. Yes.

17

A. That's all I have to say
about that.

18

Q. You have told us, Doctor,
that it is your recollection that indeed there was
a discussion with Dr. Trusler that was suggested by
Dr. Burns and, as I understood it, essentially
Dr. Trusler was saying there was not much more that
could be done, given the size of the pulmonary artery.

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Is that essentially what his views are?

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A. That was what I gathered

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from what was reported to me.

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Q. Nevertheless, Dr. Jedeikin

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had said on the previous page, on the 19th:

7

"This child is a candidate for transfer
to the ward."

8

Was that a matter of any discussion,

9

whether the child should be removed from the ICU

10

and sent back to the ward?

11

A. I think the discussion only

12

concerned whether or not the shunt should be done

13

now. If that couldn't be done, I think everybody

14

accepted that there was no particular reason to

15

keep the baby in the ICU.

16

Q. Because otherwise she seemed

to be doing reasonably well?

17

A. Yes, seemed to be stable.

18

Q. Indeed, on the 22nd, she did

19

go to the ward, did she not? That is on page 40

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of the progress notes.

21

A. Yes.

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Q. "Received the patient in the
ICU at 11:15."

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A. Yes.

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Q. Respiration is shallow and irregular, apex is regular, there is recorded air entry throughout but noisy upper lobes, taking formula well, avoiding adequate amount.

I take it that heart failure was not a concern, or not a particular concern with this child, was it?

A. No, I don't think that would have been at all possible - or at all likely.

Q. And records that parents were both in today, held the baby, fed the baby, concerned, had lots of questions, generally pleased with progress. That is the 22nd.

A. Yes, I believe that's true.

Q. Around the middle of the day the baby comes back to the ward.

On the 23rd at 4:25 in the morning, the next page, there is a medical resident noted the arrest. Perhaps we should first look at the nursing note at the foot of that page covering the period from 7:00 p.m. on the 22nd to 3:30 in the morning of the 23rd.

The nursing note, I can only tell you, Doctor, that by recourse to the original I have been able to decipher some of this and I can perhaps help you.



Rowe, dr.ex.
(Lamek)

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A. Right.

Q. It says:

"Patient relatively stable, heparin infusion well, patient feeling eagerly, 1½ to 2 ounces every three hours, apex 144 to 152 and regular, respirations 50 to 52 shallow but in no distress, colour pink in room air, dusky when upset, became restless after second feed, however, settled well."

Am I right, Doctor, that does not sound like a very turbulent evening?

A. No.

Q. Baby seems to be in reasonably good shape?

A. Yes.

Q. The note at the very bottom of the page is 0330, half past 3:00 in the morning:

"Baby became restless, breathing very shallow, apex irregular and bradycardic, placed on cardiac monitor."

And then over the page:

"Colour became more dusky, 100 per cent oxygen given by mask, cold cyanotic



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"extremities, vomited small amount of
mucus, suctioned, Dr. Brand called and
a Code 25 called."

A. Yes.

Q. So, something occurred around
3:30 to change the pattern that had apparently
prevailed through the evening?

A. Yes, indeed.

Q. And the arrest note on page 41:
"Called at 3:30 re irregular apex with
bradycardia and observed baby was
cyanosed, cool extremities, weak
pulses, heart rate irregular on the
monitor, 80 to 180 with variable QRS
patterns. HS faint."

A. Heart sounds.

Q. Heart sounds, thank you.

"No murmur. Called Fellow in
Cardiology and cardiovascular surgeon.
Tried to have arterial gases and gave
oxygen by mask.

3:40 vomited, suction; 3:45 arrest,
fibrillation, massage started."

And then he goes on to list the steps that he took:

"Arterial blood gases at 4 o'clock in



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"the morning. Somebody at some stage
has put a square around the potassium
of 7.4, not hemolized."

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What is the significance of that,

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Doctor?

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A. It is a relatively high level.

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Q. And then he summarizes the
cause: intubated. Is that cardioversion? Is that
shock, attempting to defibrillate?

9

10

A. Yes, from fibrillation went

11

into asystole.

12

Q. Yes. Failure to initiate

13

heart rate, resuscitation stopped at 4:20.

14

A. Yes.

15

Q. Doctor, it is reminiscent of
the pattern that we have seen in a lot of other
cases, is it not?

16

17

A. Yes.

18

Q. An apparently stable child
throughout, in the course of five or six hours in
the evening that suddenly there seems to fall off
the edge of the world, something happens and the
child goes into an immediate and rapid and dramatic
decline and cannot be resuscitated.

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A. Right.

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Q. It is characterized by the arrhythmias, in this case we've got some vomiting. It is the pattern that we have seen over and over again, is it not?

A. Yes.

Q. Was it your view when you considered this chart, Doctor, that the time of this child's death, the manner of onset of the terminal events and the cause of the terminal events were consistent with her anatomical and clinical condition?

A. Yes.

Q. I take it that you will agree that the symptoms exhibited, and the manner of their being exhibited, are also consistent with digoxin intoxication?

A. Yes.

Q. But this is a baby that never had digoxin?

A. No, the baby had never had digoxin.

Q. Well, let's be precise, digoxin had never been prescribed for this baby.

A. Yes.

Q. Were any questions raised by any of the cardiology staff or Cardiac Fellows in



1
2 the Hospital as to the reason for this sudden
3 decline and death of this child?

4 A. I think there were questions
5 but the discussion really centred around the
6 precarious nature of the shunt and the probable
7 explanation was thought to be that the shunt
8 occluded because no murmur was heard in the period
9 before the arrest and the knowledge of the anatomical
10 and surgical detail, the possibility that hepariniza-
11 tion wasn't effective led to the conclusion, which
12 I believe was shared by everybody, that the shunt
had probably clotted off.

13 Q. Now, unhappily, because there
14 was no consent given to autopsy, that could not be
15 verified?

16 A. No, it was clinical interpre-
17 tation.

18 Q. So, I take it in the first
19 instance, Doctor, that notwithstanding what was
20 seen at the time of surgery, the Lombardo child's
21 defects were of a kind and level of severity that
22 could perhaps be assisted by the surgical inter-
vention?

23 A. I think though this is a much
24 more questionable case than any other because of the
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size of pulmonary arteries. I think when it was discovered that an adequate usual type of shunt couldn't be performed, I think that would change the prognosis measurably.

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Q. Now, the size of the pulmonary artery of course had been evident from the moment the child's chest was opened for surgery?

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A. Yes.

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Q. And the difficulties, the prospects therefore must have been apparent from that time?

15

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A. Yes. It is difficult to make the final statement on that until the surgeon actually goes to make the connection.

18

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Q. Yes, but he must have observed the size of the pulmonary artery?

21

22

A. Yes, he would note they were small.

23

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Q. And recognize the difficulties. Indeed, as I understand, you had to change his surgical plan?

25

A. Yes. But that was only after he got in there.

Q. After the child was opened, yes.

A. Yes.



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Q. But the potential problem with the shunt into a vessel of that small size must have been known from the time of surgery?

A. Yes.

Q. In the immediate post-operative period, therefore, was it considered that Stephanie Lombardo was at risk of imminent death?

A. In the immediate post-operative period?

Q. Yes, her condition is now known, the difficulties inherent in that shunt are now known because of the size of the pulmonary artery?

A. Yes.

Q. She had been put on heparin?

A. Yes.

Q. But is it contemplated at that time that she is at risk of imminent death because of the sheer anatomy of the situation?

A. Well, I can't say that was voiced other than to judge from the notes that are made in the Intensive Care Unit and the conversations that were held with Dr. Trusler that people must have been concerned. They may not have written down "I think this baby is going to die unless another shunt is done", but they obviously were



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thinking along those lines because of the note.

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Q. Apparently somewhere in any
event.

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A. Oh, I think at least two
cardiologists felt that way.

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Q. Did Dr. Jedeikin feel that
way?

9

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A. No, but two staff cardiologists,
two senior cardiologists did.

11

12

Q. That would be Dr. Izukawa?

13

A. Dr. Izukawa was one and
Dr. Burns is the other. She is a fully trained
cardiologist.

14

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Q. I see. As far as the
observable progress of the child was concerned,
it seemed in the immediate post-operative period
that an improvement had been achieved?

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A. Yes.

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Q. The question was how long
could it be sustained?

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A. Yes.

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Q. Would the shunt occlude?

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Dr. je

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Q. Or would it be sufficient to convey enough blood through the lungs?

A. That was our hope, yes.

Q. And she continued to have a measure of cyanosis that is recorded throughout the notes, nail beds, cyanotic, and when she cries she gets dusky, that sort of thing. We also see some continuing level of inadequate oxygenation of the blood?

A. Yes.

Q. But at what stage, Doctor, was it considered that Stephanie Lombardo's prospects for survival beyond the next half hour were non-existent?

A. I don't think anybody would say they were non-existent. They could not make that judgment other than to say that the shunt was a small one and there was a risk for that reason alone.

Q. But if the shunt did not do the job then I take it this child was going to die?

A. Yes.

Q. And the shunt could fail to do the job in one or two ways. Either it would prove to be inadequate and you would expect therefore a decline of the child, maybe a fairly rapid decline but a decline which might take place over a greater or



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lesser period of time and she would die, or the shunt would occlude, and in that case I take it that death would be pretty sudden, would it not?

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A. Yes.

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Q. And although this child was being heparinized, you said, a rather difficult procedure to attain satisfactorily, and the purpose of it is to reduce the risk of occlusion of that shunt, is it not?

10

A. Yes.

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Q. You do not know whether that is going to work, and if it does not do the work, then this child could die at any moment. Is that fair?

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A. Yes.

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Q. That is why I say that essentially one cannot say to anyone, Stephanie Lombardo can be counted on to live beyond tomorrow. Was that not really the situation? You could have no confidence that this child would live beyond tomorrow on the basis of what you have told me?

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A. I don't know that we would take as pessimistic a view of that as you have. I think that our approach would be that there are risks in this, we can try very hard with the measures we know we can use and it is possible that the baby can



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survive with that arrangement. But it is also possible it may not. Experience tells us that we have had problems of this nature where shunts have been borderline before and some do well and some do poorly. I don't know the comments in detail that were made between these people and I think if you want those, about what they specifically thought, you would have to speak to Dr. Trusler and perhaps Dr. Izukawa.

Q. Do you know whether the child's parents were told what the prospects for their daughter were?

A. I don't know.

Q. I would take it, Doctor, that if there is a perceived and reasonable risk that a child will not survive, that it is normal or usual to prepare the parents for that situation?

A. Yes, that would be the case but it would depend on a number of things.

Q. Upon what, in this case?

A. Well, the surgeon would have spoken to them after the operation and I don't think that a surgeon is going to say to anybody that the prospect of your child dying suddenly within the next half hour is the case when he cannot really make that



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2 prediction accurately. He is going to be more
3 optimistic than that. I do not know what he said to
4 this family, but I think in the general way that
5 physicians talk to the parents, they are not going
6 to hit them over the head with a hammer right after
7 they have gone through a traumatic experience with
8 an operation.

8 Q. Of course not, Dr. Rowe. We
9 are now talking about almost a week after surgery
10 and you would know far better than I that there are
11 ways of advising parents of the chance or the
12 probability or the likelihood that that child is
13 going to make it. You do not hit people over the
14 head with those things, I agree.

14 A. No.

15 Q. Do you know if anything was
16 said to these parents?

17 A. I don't know.

18 Q. To warn them of the possibility
19 that that child might suddenly die?

20 A. I don't know. You would have
21 to ask the surgeon and the physician. It was a
22 patient of Dr. Trusler's and he would have been the
23 one who would have presumably talked to them.

23 Q. When you say that you don't think
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that you and your staff people were as pessimistic in your view of this child's prospects as the way in which I categorized them, may I take it from that that at the time Stephanie Lombardo died her death was sudden and unexpected?

A. Yes, you could say that.

Q. I don't mean just unexpected in the sense that you defined it in January 1981, Doctor?

A. Oh, I see. I would not be all that surprised at this event happening because of the precarious nature of the shunt, but it is a sudden death, all right.

Q. It is certainly a sudden death and one that you would have at least hoped would not occur at the time and in the manner that it did?

A. Yes.

Q. Was anyone else on your staff, to your knowledge, surprised that Stephanie Lombardo died as she did in the early hours of December 23rd?

A. I cannot recall. I think people were concerned about the issue of the shunt size and whether there were other things we might have done, that sort of thing, but I do not believe that there was a lot of - everybody recognized the precarious nature of that type of shunt.



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Q. I take it that it is your opinion, I want to be clear, that Baby Lombardo died probably because of a sudden occlusion of the shunt?

A. That would be my interpretation of that data.

Q. And is it your understanding from such discussions as you may have had with other staff cardiologists and indeed cardiovascular surgeons at the Hospital that they share that view as to the cause of this child's death?

A. Yes, I believe so.

Q. Now, Doctor, notwithstanding that you have told me that the terminal events in the case of Stephanie Lombardo were consistent with digoxin intoxication, I take it that that was not an explanation for this child's death that occurred to you at the time?

A. No, it did not, at all.

Q. Was that because this was a child for whom this drug had not been prescribed?

A. Yes.

Q. That is an interesting answer, Doctor. If you pause to think whether digoxin had been prescribed for her does that not suggest that you considered the possibility of intoxication?



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A. No.

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Q. If you did not - if the

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thought never crossed your mind, why were you so firm
in saying no, it did not, because she was not on the
drug?

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A. I did not think of that at the
time. That was subsequently.

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Q. The thought has occurred to you
since?

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A. Since that time, right.

11

Q. And part of what we are going

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to be doing next week is asking whether at a later
date you went back and reconsidered some of these
deaths.

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A. Yes.

15

Q. Perhaps we might think about

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this one now then though, because you seem to have a

17

pretty clear recollection of your response when the

18

thought did come to your mind at a later date. When

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did it come into your mind at a later date that these

20

terminal events were indeed consistent with digoxin
intoxication?

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A. I think after the events of

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March.

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Q. Was it as part of an overall

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review of the ward deaths that you were considering
this one?

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A. Yes.

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Q. At that time, did you recognize
that the terminal events shown in the chart of this
child could be considered to be consistent with
digoxin intoxication?

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A. Yes.

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Q. And from what you have said I
rather take it you dismissed that as an explanation for
the child's death?

12

A. Yes.

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Q. Why?

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A. Because I thought that the other
explanation was much more likely. No murmur was
heard, the baby had a small shunt, the anatomy was
appropriate; but I cannot exclude the other possibility.

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Q. I think the proper thing,
Doctor, to do, is to wait until we can look at the
whole series and ask that kind of question because
it is obviously part of an overall review and it may
not be appropriate to take them individually out of
that context. So let us come back to that next week.

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Mr. Commissioner, it is 11:25. I
assure you I will keep my promise to be finished before



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lunch time. May we take a short break?

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THE COMMISSIONER: Yes. We will take

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fifteen minutes.

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--- Short recess.

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H/DM/ak

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---Upon resuming at 11:45 a.m.

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THE COMMISSIONER: Yes, Mr. Lamek.

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MR. LAMEK: Thank you,

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Mr. Commissioner.

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Q. Dr. Rowe, may we then go to

7

the last of the on-ward deaths in 1980, that of
Jesse Belanger?

8

9

Mr. Commissioner, I should say right
now that this is a male child.

10

THE COMMISSIONER: Yes, all right.

11

Thank you.

12

MR. LAMEK: The middle name was

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David I understand.

14

Q. Baby Belanger was admitted

15

to the Hospital on November the 19th and he died,
did he not, in the evening of December the 28th,
1980, some six days after surgery?

16

17

A. Yes.

18

Q. Now, Doctor, we have on the

19

easel a diagram that I understand depicts the
anatomy of this child's heart. Will you confirm
first that it does so depict.

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A. Yes, it does.

22

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MR. LAMEK: May that be the next
exhibit, Mr. Commissioner.

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---EXHIBIT NO. 90: Heart Diagram of Jesse
Belanger.

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MR. LAMEK: Q. Dr. Rowe, this one
may take some explanation, can you describe it for
us, please?

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A. Well, I will try, it is a
complicated defect. Is this thing on?

9

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THE COMMISSIONER: No, I can hear
you much better.

11

MR. LAMEK: I think it is.

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THE COMMISSIONER: I might say we
are going to try the first day at the new quarters
without these contraptions and see if we can hear
each other better.

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THE WITNESS: The defect is a
complex form of pulmonary stenosis. Internally the
heart is almost completely a single chambered
heart. There is no atrial wall at all at the top
chamber. There is no true ventricular septum in
the bottom. So that there is really what is known
as a single atrium and a single ventricle. So I
correct what I said, it is a two chambered heart
rather than a single chamber. One pumping chamber
and one receiving chamber, so there is complete
mixing at the top level.



H3
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3 The valve between the two chambers is
4 a common valve, one single valve instead of two,
5 it is a single atrial ventricular valve.

6 Now, although it is called a single
7 ventricle, there is a pocket or outlet portion
8 which is in the recesses, it is a hard thing to
9 demonstrate on a simple diagram like this, but there
10 is a corner of this single ventricle which contains
11 a rudimentary chamber and from that chamber arises
12 a very small pulmonary artery.

13 The aorta arises from the single
14 ventricle in an unobstructive way and since most
15 of the blood that leaves this pumping chamber is
16 going, it cannot get out through the artery to the
17 lung, the aorta is the larger of the two vessels,
18 it branches in such a way, and points in such a way
19 that it goes down on the right side, so there is a
20 right sided aorta gouge. I think I have said before
21 that that is not of great functional importance to
22 anybody but in this particular instance it is one
23 of the difficulties.

24 The subclavian artery to the left arm
25 arises from the aorta when it is in the right side
of the chest, and so winds a way over to the left
arm in that way, and that had importance in the



1
2 management, the surgical management of this patient.

3 So the blood coming into the heart
4 enters in the usual way and when it gets to the
5 right atrium it enters really - to the right side,
6 it enters really the whole of the atrium, and so there
7 is mixing of the blood that is coming back from the
8 lung which isn't very much and the blue blood that
9 is coming in from this side. And that is all
10 discharged down here, some of it gets out to the
11 arteries to the lung, most of it goes around the
12 aorta, and what would be important in this baby's
13 survival would be ways in which more blood could get
14 to the lung as the principle and immediate problem,
15 but the rest of the anatomy is very complex, and
16 that obviously is a very serious situation.

17 I regret that we have one more area
18 in the diagram which relates to this point here and
19 perhaps I could deal with that now.

20 Q. Yes, please do.

21 A. And we will undertake to get
22 that error changed.

23 Q. Thank you.

24 A. We were under the impression
25 that a Blalock-Taussig shunt with gortex had been
performed on this child to increase the blood supply



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2 to the lung. Because this artery as in an abnormal
3 course like that instead of arching straight down
4 in the usual way if the vessel had not been attached
5 way down over here, is not a very good direct
6 angle to anastomosed to the pulmonary artery. There-
7 fore it is more usual to put a gortex connection
8 between the two. I think that we advised the
9 artist to do that and unfortunately we advised him
10 incorrectly. Because the surgeon did in fact tuck
11 this vessel directly into the pulmonary artery. So
12 this is an error, but the purpose of the operation
13 is exactly the same, it is just that the diagram
needs to be corrected for that point.

14 Q. The shunt was in fact
15 performed by bringing the two together?

16 A. Right, for putting the end
17 of this into there just as that gortex has been done,
18 just taking this and sewing it into this vessel.

19 Q. What then happened to the
20 blood supply to the left arm?

21 A. The blood supply to the left
22 arm is always changed as a result of the operation,
23 but because there are many vessels at the shoulder
24 that open up after that is done, the circulation to
25 the left arm is usually perfectly good.



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Q. Thank you. Doctor, again for the purposes of summarizing and getting an overview of this child's course, can we look at the discharge, or death report on page 26 of the record.

A. Yes.

Q. The child was two days old when he came to the Hospital for Sick Children and had a congenital heart defect and the anatomical anomalies that you have described. He had been seen to be cyanotic shortly after birth and he had been sent to the Hospital for investigation and thereby catheterization these various defects were identified were they, Doctor?

A. Yes.

Q. There was some chromosome studies done because it was thought there might be some chromosome defect I take it, not as a result of this but other features of the child?

A. Other features, yes, suggested that possibility.

Q. But in fact it was shown there were not chromosome defects I gather?

A. That is correct.

Q. And having been admitted to the Hospital on the 19th of November, a little over



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a month later the shunt you have described for us was performed and it appeared to improve the oxygenation of the blood, the murmur that was heard, but there was concern that this shunt too might not be adequate?

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A. Yes, there was some questions about it.

8

9

Q. And he too was being treated with heparin in the hope that that would prevent occlusion of the shunt by blood clotting.

10

11

A. Yes.

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Q. And your name appears on the lower half of the page 26, Doctor, it is recorded on the 26th of December, 1980, the PO₂ was 48:

14

15

"In agreement with Dr. Richard Rowe, the child was transferred from the ICU Ward to Ward 7G."

16

And we will come to that in a little while.

17

18

Can you just tell us for a moment why that particular transfer was made at that time?

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A. That was because I was a little concerned about the baby going back to the 4th floor, because I thought it still needed some sort of extra monitoring and care that would be best provided in an intermediate type setting or Intensive Care setting.



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yes.

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Q. So 7G is what, the Neonatal

A. That is the Neonatal floor,

Q. But two days later the

child did in fact come to Ward 4A, and I gather
as will appear from the chart there was a bit of a
squeeze of beds at that time?

A. Yes.

Q. There was collapse left

lung and it is noted the heparin infusion was
progressively weaned off. Does that mean the
administration of heparin was stopped?

A. Yes, it is usually only
continued for a specific number of days and then
it is stopped.

Q. The child goes back to Ward

4A on December the 28th, and five and a half hours
later in the evening sudden cardiac arrest,
resuscitation efforts and he cannot be revived, he
died.

A. Yes.

Q. Now, Doctor, can you tell
please what in your judgment are the significant
matters in this child's course and in the record



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which will assist in an understanding of his death
and the time and the manner of his dying?

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A. Yes. Initially the oxygen
status of this baby, the amount of oxygen in the
arterial blood was fairly good but while we were
awaiting information about chromosomes and watching
the baby it was obvious that the degree of pulmonary
stenosis, or obstruction of pulmonary blood flow
was increasing and that led to the decision for
the shunt.



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But it was always difficult in this baby to be absolutely sure that the state of oxygenation was not being affected by other things because there was a bilateral cleft palate, bilateral harelip and cleft palate, and that is the situation in a baby who is well of a lot of difficulty from time to time that requires suction of mucus and they can be quite difficult to manage. But if they have heart disease as well, there is an extra concern.

There was evidence I think on the 26th of December.

Q. 26th of ... ?

A. There's a note in mine on page 58 that the baby had an abbreviated shunt murmur. That means that the murmur was not entirely just systolic, did go over into the other phase of the cardiac cycle, but it was short. It wasn't a good going, roaring ductal murmur and yet the baby's colour was good in oxygen.

So, I was not too disturbed by that; a little worried about what the abbreviated murmur might mean.

That usually means if the baby looks pink there may be a very big shunt.

Q. Yes.



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A. So, that may be one of the concerns there might be that the shunt was larger than we had anticipated.

I said there that I would be content, and I am quoting, that the shunt is working, but concerned about transfer, unless this can be arranged through a monitoring intermediate intensive area because of the respiratory problem and the risks involved - and the risks, unquote. The main concern would be that if you have a massive collapse of a lung that's been shunted, then the shunt may be obliterated.

I thought it would be helpful if we could get a little further along in the postoperative period before the baby came back to the regular ward. That I believe was the reason for the transfer to 7G. Normally that doesn't happen and they are not terribly willing to accept patients in that way because they are so busy with new admissions all the time that they have difficulty accommodating boarders, as they might perhaps say.

But I think in that environment there were no particular problems.

I think everybody was pleased with the murmur and then because of the bed shortage, the baby



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was transferred down to the Cardiac Ward. I don't know where the evidence about the X-ray is, but there was some collapse of the X-ray - some collapse of the left lung evident on an X-ray, I think that is on page 62, a note by the admitting physician.

Page 62, he is talking about no acute distress and the colour was obviously good, there was a liver edge that was a little bit down and the respirations were a bit faster than you would expect, so, there was some evidence there of the possibility of early congestive heart failure, although, not outstanding.

13

Q. Yes.

14

A. But there was on the chest X-ray, the last but one line, "collapsed left lung".

15

Q. Yes.

16

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18

19

A. So that clearly there was a situation that was of the sort I was concerned about. But I imagine everybody pitched in and did what could be done and looked after things in the usual way.

20

THE COMMISSIONER: I'm sorry, what was that, what happened?

21

22

THE WITNESS: I think everybody pitched in to look after things in the usual way.

23

24

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THE COMMISSIONER: Yes, but what was



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the effect of the collapsed left lung? It did not have the dire effect that you were fearing, did it?

THE WITNESS: Well, I think a collapsed left lung jeopardizes the shunt or may interfere with the function of the shunt because it distorts the arrangement of the artery and the connecting artery that's been anastomosed.

MR. LAMEK: Q. But on autopsy, Dr. Rowe, did it not appear that the shunt was intact and open?

A. Oh, yes it did, yes. The events subsequently proved that it wasn't the case that that risk that I was concerned about had produced any ill effect, but it would still be a prudent concern.

Q. It was a matter for concern that it might?

A. Yes.

Q. In fact, it did not have the result that you feared?

A. No.

Q. Yes.

A. As I read through the nurses' notes, there was a moderate amount of mucus, the baby was stable during the afternoon but then the apex became irregular, the colour dusky and the respirations increased about 80 at one point. Now, I don't know



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whether I can find that again.

Q. It should be around page 64, Doctor, somewhere. Yes, on page 64, the note at the top of the page.

A. " ... moderate amount of white mucus. Colour remained pink. Apex noted to be irregular, colour somewhat dusky. Respirations increased to 80 and very shallow. Suctioned orally ... "

The suctioning issue occurs because of the fact that this baby had a cleft palate. That's the reason for all that. And then the events are as described subsequently.

Q. Yes. Doctor, may I ask you this. I don't mean to be facetious, but we have not often seen in these charts, particularly in the progress notes, notes by yourself. How did it come about that you were involved in the management of this child to the extent that apparently you were, from the notes? There is one on page 58, another one at page 55?

A. I have to do my turn on weekend duty like everybody else.

Q. I see. These were weekends, were they?



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A. Yes.

Q. Okay. Can we just fill in some of the spaces, Doctor?

A. Yes.

Q. I don't want to spend too long on this. The child was admitted, as we have said, on the 17th, and the next day there is a two-dimensional echocardiogram done, the day after that, the 19th, cardiac catheterization. That report, and I don't think you need to look at it, Doctor, but should you need to look at it I can give you the page reference, but you have told us what it disclosed.

A. Yes.

Q. And it is not a concern now?

A. No.

Q. Page 38 of the record, this page had initially been admitted to the Neonatal ICU, had he not, 7G?

A. Yes.

Q. At the top of the page on the 23rd of November:

"In view of stability of baby, baby can be transferred to 7F."

This is in that waiting period which extended for some considerable time until surgery could go ahead, is that correct?



I.7

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A. Yes.

3

Q. But at that stage apparently

4

the baby was thought not to require the special

5

attention that it would have in the Neonatal Intensive

6

Care Unit. Is that fair?

7

A. That's right, this is a somewhat

8

less intense area.

9

Q. Yes. At the bottom of that

10

page, incidentally, again on the 23rd of November,

11

there is a notation that the child is cyanotic but
not in congestive heart failure?

12

A. Acyanotic.

13

Q. I'm sorry, acyanotic. It's not

14

turning blue and it is not in congestive heart failure?

15

A. Yes.

16

Q. I take it CHF was not a problem

17

with this child during its course in the Hospital?

18

A. Not before operation.

19

Q. Yes, not before operation.

20

A. No.

21

Q. But on the other hand when we

22

get to page 39, in the afternoon on November 23rd,
there is a note that the baby gets cyanotic when
crying and feeding?

23

A. Yes.

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Q. Now, that's the 24th, vital signs stable and that's the pattern that emerges through 40, vital signs stable, needs suctioning for large amounts of mucus and so on. Vomited on the 24th, 5 to 10 cubic centimetres of, what's that, fresh feed? No, each feed. But the pattern goes on, "vital signs stable" on the 25th, 26th, colour good and in no apparent distress.

And while this child is going on and a chromosomal investigation is being carried out, he seems to be moving along fairly evenly, does he not?

A. Yes, he had one or two little odd things like the episode on the 26th, but nothing that was of great concern.

Q. Yes. That's right, the question of heart failure raised there too, the middle of page 41 with respect to November 26th?

A. Yes.

Q. He had a spell of pallor. Do you have that, sir?

THE COMMISSIONER: Yes.

THE WITNESS: Yes.

MR. LAMEK: Q. So, we go on through the end of November and things are going along. November 30th he is stable, again there is a bit of



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vomiting but I take it nothing to be concerned about particularly in those small incidents in the course of this child?

A. Yes, including the skin infection.

Q. Yes. We get to December 1 on page 45 and it was observed that the child was lethargic, scarcely waking up, and then at the bottom of the page the note, on which I would like your comment, Doctor, 3rd of December at 8 p.m., discussion with Dr. Thomson.

Down at the bottom, having recorded the PO₂ of 21:

"This PO₂ can't be doing his brain much good, perhaps we should discuss early shunt revision with cardiologists rather than wait for further genetic analysis. Will discuss in the morning."



/DP/ak

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Was there a discussion about moving earlier on the cardiovascular surgery than had been planned at that time?

A. I think there was, yes. I think they asked me to come and have a look again.

Q. Could you help us, Doctor. Why was surgery being delayed here? I know there was a chromosomal investigation going on. What was the significance of that in terms of timing of surgery?

A. I think they wanted to be absolutely sure that this was not a chromosomal defect that might be of the type that would lead to inevitable death.

Q. Sorry, I don't understand that.

A. There are certain types of chromosomal abnormality, particularly there is a type which is lethal to young infants and is commonly associated with ---

Q. And what if it were of such a type?

A. Then the surgeons would not participate in an operation if the baby was going to die within the next few months.



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THE COMMISSIONER: Sorry, I missed that.

THE WITNESS: Surgeons would be unlikely to participate in an operation for a child who is inevitably going to die within a few months from not ---

MR. LAMEK: Q. From something entirely different?

A. From something entirely different.

This is a very difficult and delicate question, of course, in which the pediatrician involved here was Dr. Saunders and he spent a great of time with this matter, with the family, and discussing with others.

Q. Was the surgery that was eventually performed the same surgery that had been proposed from the beginning?

A. The surgery that had been proposed in the beginning, yes, was a probable shunt at the appropriate time because at the time of the original investigation, the baby's oxygen content was really very good, because there was a lot of good mixing and there was more blood going to the lung. It was anticipated that that might change,



1
2 but the speed at which it changes is not really
3 predictable.

4 Q. And what is happening therefore
5 when we look at the note on page 45 of the record,
6 Doctor, is someone is saying, look, the PO_2 has
7 changed to an extent where if we wait for the
8 chromosomal investigation to be completed it may be
9 too late to do anything even if the right answer
comes out of that investigation.

10 A. That is a fair assumption.

11 Q. We may find there is no
12 chromosomal damage but by then this child may have
13 gone to the extent where a shunt is not going to
14 do him very much good. Is that essentially what is
being said?

15 A. Yes, I think in all fairness
16 that blood gas is measured at a very low oxygen tension
17 would be something you would want to repeat before
18 you came to that conclusion, but it was a reasonable
19 concern, and they approached me about that.

20 Q. On page 46 there is a plastic
21 surgery note but again there is a comment referring
22 to cardiologists at the bottom of that note.

23 "In discussing with Dr. Freedom, the
24 immediate future of this child is
25



1

2

"somewhat up in the air."

3

Does that again refer to the question of waiting
4 until the chromosomal investigation had been
5 completed?

6

A. I think so. I assume so.

7

I am not absolutely sure. He may have been
8 referring to something else, but that is what it
sounds like to me.

9

10

Q. Was there any other respect
in which, so far as you were aware, the immediate
11 future of the child was somewhat up in the air at
12 at early December?

13

A. It is conceivable he might
14 have been referring to the long term prognosis but
I cannot read that into that.

15

16

Q. Not when he says immediate
future?

17

A. Yes.

18

19

Q. Then on December 4th, Doctor,
there is a note by you.

20

A. Yes.

21

Q. On page 49, 4-12-80 headed
22 "Cardiology" you are probably better at reading your
handwriting than I am, Doctor. Will you read that
23 for us, please.

24

25



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3 A. I am disappointed. That looks
4 like the best handwriting on the page.

5 Q. It is terrific handwriting,
6 but I would not want to do violence to it. It says
7 "The signs suggest that..."

8 A. "The signs suggest that
9 infundibular pulmonary stenosis may
10 have become more significant, that
11 is, tetralogy of Fallot like physiology.
12 In the event of progressive hypoxic
13 signs propranolol would be a reasonable
14 therapy on trial. A shunt is a likely
15 later need."

16 Q. Right. If I understand you
17 are right, you are saying if it gets to the point
18 where we have to intervene in some way before all
19 the information is available we can probably do it
20 initially medically although at some stage we may
21 have to intervene surgically.

22 A. That is right.

23 Q. Medically with propranolol.

24 A. Yes.

25 Q. That in response to the
suggestion I take it that maybe we had better get
on with the surgical intervention, saying okay,



1
2 cool it if you like, if it gets to that point we
3 can probably do something else medically before we
4 have to make the surgical decision.

5 A. Yes, that is a very accurate
6 description.

7 Q. As of that date it is recorded
8 in the note that the baby is not in heart failure.

9 "Cardiologists would prefer to wait
10 a few months before attempting shunt
11 operation - in fact they feel it
12 really is not appropriate at this stage."

13 That, I take it, was the kind of view
14 which lead you to say we can do some more medically
15 before we consider anything else.

16 A. Yes.

17 Q. And with a few minor
18 episodes the course goes on until the time of
19 surgery except we start seeing notes such as that
20 on page 51, the bottom of 51, nursing note, which I
21 believe is the 6th or the 7th. Vital signs are
22 stable; tolerates feeds well, colour is mottled
23 in 50 per cent oxygen, skin cold and clammy. That
24 starts to appear as a regular report in the nursing
25 notes, does it not, Doctor?

A. Yes.



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Q. The next day, colour very pale, in 50 per cent oxygen. Vital signs are stable. The next day but one, skin appears very pale, cold and clammy to the touch. Very prominent circumoral pallor. Colour mottled in 70 per cent oxygen. Vital signs stable.

What does all that indicate or suggest, Doctor, the coldness, clamminess, the colour?

A. Difficulties in maintaining temperatures. That is not a good sign in a baby to have those features. If a baby's temperature goes off very much they can be quite prone to unexpected and sudden death. Hypothermia is a high risk situation for a small infant.

Q. What produces hypothermia?

A. Well, it may be the general status of the baby; it may be something in terms of brain function. There may be a whole host of things that may do that. I imagine the neonatologists were addressing that question during that period.

Q. -Page 53, on the 15th of the month, the nursing note reports the colour is gray, cool to the touch in 90 per cent oxygen, extremities are pale and cool, vital signs remain stable. The child appears more alert, tolerates



1
2 feeds well, no vomiting. The colour of the child
3 seems to get progressively worse as the amount of
4 oxygen in its environment is increased and the
5 increase of oxygen does not seem to help to reverse
6 that change in colour and coldness and loss of
7 temperature and so on.

8 A. No.

9 Q. Then we come to your note on
10 the 20th, on page 55. Can you help us with that one
11 please?

12 A. "This baby is, after discussion
13 with Dr. Saunders and the family, to
14 undergo an aorta pulmonary shunt and
15 at present this is planned for
16 December 21st. I have spoken to
17 the parents about surgery as has
18 Dr. Freedom..."
19 to whom the patient was originally referred.

20 Q. Yes.

21 A. I think he actually saw the
22 baby in the out-patient department from the Toronto
23 General Hosiptal nursery prior to its admission the
24 next day and Dr.Saunders, who is the pediatrician
25 for the family and the baby, and the surgical represen-
tatives.



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Q. As of the time that decision was made that surgery would be proposed and, with the blessing of the parents, proceeded with, had the chromosomal investigation been completed?

A. I think there was a preliminary report which, and I am not sure whether Dr. Saunders had - I think it probably must have been finalized, but I'm not sure. I think there was a report on the 24th of November and a report on the 15th of December. I think the final report was the 15th of December so I guess it had been decided by that time.

Q. And did it not appear that there was the life threatening genetic condition?

A. No, this was a normal chromosomal complement.

Q. So that was no longer an obstacle to proceeding with the decision to surgery?

A. No.

Q. Why at this stage, Doctor, were you not proceeding in the way you had suggested initially in early December, medically, to deal with this situation?

A. I think the baby had been on propanolol.



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J10

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Q. You had taken that step
already and now was the time to intervene surgically.

4

A. Yes, it did not seem to help.

5

6

Q. Surgery was the only play
left?

7

A. I think so.

8

Q. That was available, all right.

9

10

Now, the operative note in the
progress notes at least is dated December 23rd but
I understand in fact surgery was performed on the
22nd, was it not? The surgical note is ---

11

12

A. Yes, I have 23rd in my notes.

13

Q. The 23rd?

14

15

A. But you are right, it is
the 22nd - it is the 22nd on the operation sheet
and on the operative report, so I'm wrong.

16

17

Q. It was the 22nd, I believe.

18

A. Yes.

19

20

Q. And Dr. Williams' reporting
letter to Dr. Freedom although dated the 23rd refers to
surgery on the 22nd.

21

A. Yes, that is correct.

22

Q. Could we look at that for
a moment, please, page 8 of the record. He reports:

23

24

"I operated on this baby on December

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"22nd to palliate his congenital heart defect. ... There was also some concern about the size of the right ventricle, so that he may never be suitable for total repair."

Was it contemplated that they might be able to perform rather more drastic surgery to repair the situation rather than to palliate it at a later stage?

A. That would depend upon the interpretation of the angiograms and things. I am not quite sure whether, before all the other information was gathered, whether we had that.

Q. That may be something that I can ask Dr. Trusler about.

A. Dr. Trusler or Dr. Freedom.

Q. Or Dr. Williams in this case, or Dr. Freedom, as you say.

A. Yes.

Q. At the bottom of page 1 of the letter, Dr. Williams reports:

"Postoperatively he has been stable and his saturation has been harbouring about 70 per cent to 80 per cent."

The significance of that, please?



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A. That is not an unreasonable

value. I think one would hope to get saturation,
meaning oxygen content of blood in the arteries,
at around 80 per cent to 85 optimally.

Q. Was 70 per cent to 80 per cent
an improvement over the pre-operative condition?

A. Yes.

Q. A significant improvement?

A. Yes, I think so. He would
have been I think I would judge about 40 to 50
per cent at the most.

Q. A substantial improvement
although not quite as much as you would like to
see, I take it?

A. Everybody wants the best.

Q. I am sure.

"His chest x-ray this morning shows
definite increased vascularity on
the left but we are still watching
him as to whether his shunt is
sufficiently large. I think that if
there is much further question about
it we should probably re-operate on
him and do a central shunt."

Is there any concern other than that



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J13 expressed by Dr. Williams as to the adequacy of
the shunt that had been performed on this child?

A. I do not recall.

Q. You don't recall?

A. No.



DM.jc
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Q. You don't recall?

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A. No.

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Q. And you as I recall it, your evidence a few minutes ago, are reasonably satisfied that the shunt was working satisfactorily, that was your earlier note, I think, wasn't it?

5

6

7

A. I would have to look back.

8

9

Q. Because you had a drawing about it, did you not, right in the progress note, and I think you said:

10

11

"I was satisfied that the shunt is operating properly ... "

12

something of that sort?

13

14

A. Oh, before the transfer back?

15

Q. Yes, at the time of the transfer?

16

A. Yes, on the 26th.

17

Q. Yes, on the 26th.

18

A. Yes, the murmur was a little strange but the oxygen tension was good.

19

20

Q. So the baby is to be heparinized postoperatively and he goes to the ICU it would appear from page 56 of the record.

21

22

Page 57, it sounds like a miserable way to spend Christmas Day, but that was December the

23

24

25



K.2

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25th. The child is reported as: "stable,

3

spontaneous breathing ... ", is that?

4

A. Breathing.

5

Q. I can't quite see the note, page

6

57.

7

A. Breathing. I think that is what
that is, "spontaneous breathing".

8

Q. "Being heparinized and can be

9

extubated tomorrow."

10

Okay. Postoperatively does not seem to be doing badly

11

at that stage at least, Doctor, is that fair?

12

A. Yes.

13

Q. Page 58 we have your note about

14

the shunt, the one we were just looking for:

15

"Content the shunt is working but

16

concerned about transfer unless this

17

can be arranged to a monitoring

18

intermediate intensive area because

19

of the respiratory problem and risks."

20

And somehow you were able to prevail upon the people
in 7G to take this child, I take it?

21

A. Yes, an unusual accomplishment.

22

Q. And we unhappily when we get to

23

page 60, the note at the bottom, December the 27th,

24

although in fact he did not move until the 28th, I

25



P. 3

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understand. The note at the bottom is:

3

"Baby transferred from ICU because
of bed shortage."

4

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I am sorry, is that a transfer to 7G
or from 7G because of bed shortage? I must say until
now I read it as being the reason for the transfer
from 7G to the ward, but it is of course ambiguous:

6

7

8

"Baby transferred from ICU because
of bed shortage."

9

10

suggests that was the reason for the transfer to 7G,
doesn't it?

11

12

A. I don't know, it could mean
that, I suppose.

13

14

Q. Would somebody on 7G refer to
his own ward, or her own ward as the ICU?

15

16

A. No, it wouldn't be usual.

17

18

Q. No, I wouldn't have thought so.
A. It could be that the ICU was
short of beds and that both situations were satisfied
that the baby had to be transferred out of the ICU
and the options were the fourth floor.

19

20

21

Q. Either the fourth floor or the
Neonatal, I take it?

22

23

A. Yes.

24

Q. And you were able to find him a
place in the Neonatal, I presume?

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A. Not for very long but at least
for a short time.

Q. Were you content that he be
transferred out of there on the 28th?

A. I don't believe we had much
choice on that issue. I think when beds get tight
and there has to be a priority assessment taken and I
think we have to go along with that and I believe
that was the reason.

Q. Doctor, when he went to the
fourth floor on the 28th, was any enhanced level of
nursing care ordered for him?

A. I am not sure.

Q. Do you recall whether you were
involved in any decision about the level of care that
he should receive?

A. No, I am not sure, I can't
recall.

Q. I do not see anything in the
chart that suggests that such an order was made when
he went to the fourth floor?

A. No.

Q. But that may or may not be the
determinate of the question. When he goes to the
fourth floor, at page 61, he is received from 7G, his



R.S.

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2

colour, a note at the foot of the page:

3

"Colour slightly cyanosed but pink

4

in oxygen. Turns darker purple

5

when crying. Chest air entry reduced

6

to left lobes - noisy throughout."

7

So there is still something of a respiratory problem,

8

continuing respiratory problem with this child, is

9

there not?

10

A. Yes.

11

Q. December the 28th, page 64, and

12

we stop there because once again the nursing note

13

seems to follow the - no, in this case it precedes

14

the arrest note, from 1 o'clock in the afternoon

15

until 7 o'clock in the evening of the 28th. Nurse

16

Reaper reports:

17

"Stable during the afternoon. Apex

18

134-170 and regular. Tube fed, D/

19

tube fed at 2 o'clock and retained.

20

Suctioned for moderate amount of white

21

mucus. Colour remained pink."

22

And then at 6:30:

23

"Apex noted to be irregular, colour

24

somewhat dusky. Respirations went

25

up to 80 and very shallow. D/tube

feeding in progress, position checked

twice."



P.6

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Was it thought that the tube may be so placed that
it was causing some distress or some discomfort
perhaps?

4

5

A. Perhaps.

6

7

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9

Q. "Suctioned orally for moderate
amount white mucus. Colour extremely
poor. Doctor notified and present.
Apex dropped and cardiac arrest
called."

10

11

12

13

14

So from a pattern apparently during
the afternoon of stability and pinkness and regularity
in the vital signs, at 6:30 the irregularities start
and the colour changes and so on. The end of that
sequence of events, the heart rate slows and an
arrest is called.

15

16

17

18

Now again, we have a very illegible
thing, but Doctor, I can help you because I have
compared this with the original, the note at the
beginning of 7:30 reads as follows:

19

20

21

"Arrived to find Cardiology Fellow
and Resident in attendance. Baby
blue, pale, no pulse ... "

22

23

24

25

Indeed I can do better than that, Doctor, I will give
you a copy of that to look at because there are a
couple of words I can't read and maybe you can.



1.7

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I think I have it right, Doctor, and maybe you can

3

fill in the words I am missing:

4

"Baby blue, pale, no pulse, inter-

5

mittent normal complexes and

6

irregularities suggestive of multi-

7

focal ventric ectopics ... ", is

that?

8

A. Yes.

9

Q. As we go along we can do that.

10

Is he saying that from time to time there will be

11

a normal rhythmic heartbeat but then irregularities?

12

A regular beat and irregular beat interspersed?

13

A. He is - there is no pulse, so

14

he is looking at the electrocardiogram.

15

Q. Right.

16

A. So what he is seeing is

17

apparently the usual complexes of the electrocardiogram

18

Q. Those are beats off the rhythm,

19

are they?

20

A. Yes.

21

Q. And he thinks they are

ventricular?

22

A. Yes.

23

Q. So the baby is being bagged:

24

25



K.E

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2

"Bagged with 100 per cent oxygen,
fading pulse -- "?

3

4

A. Gasping.

5

Q. "Gasping", I am sorry, I
couldn't read that one.

6

"Gasping. Pupils okay, effective
CPR, new IV butterfly."

7

8

What does butterfly signify?

9

10

A. That is a type of intravenous
needle.

11

Q. Okay. Then he records:

12

"10 cc's of sodium bicarbonate given.
Small dose of adrenalin produces more
frequent normal complexes. Atropine
is given, 2 milligrams. Tubed early
by Dr. Burns ... ",

13

14

15

16

is that?

17

A. Yes.

18

Q. And:

19

"Good air entry. Further small
doses of adrenalin, bradycardia sinus
persisted with intermittent irregular
ventricular activity ... "?

20

21

22

A. "Persistent".

23

Q. "Persistent", is it?

24

25



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A. Yes.

3

Q. "Bradycardia sinus persistent ..".

4

A. "Persisted".

5

Q. "Persisted" is it, I am sorry:

6

"With intermittent ventricular
activity."

7

A. Yes.

8

Q. "Isuprel bicarb led to some

9

improvement but no output felt."

10

He was seeing something on the ECG but he wasn't feeling

11

a pulse, is that what is happening?

12

A. Yes, when he stopped doing,

13

briefly stopped the compression I presume it was going
on.

14

Q. Then he talks of the admini-

15

stration of a couple of things and I can't read this

16

line, Doctor, can you help me?

17

A. That is "calcium glutamate".

18

Q. Yes, "1.5 cc"?

19

A. Yes, 1.5 cc.

20

Q. "No plus .." something effect?

21

A. "No positive inotropic effect".

22

Q. "Inotropic", what does that mean?

23

A. That just means contraction.

24

Q. Then: "narrow ventricular ...",
and I can't read the next word.

25



P.10

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A. "Going to ventricular
instability plus, plus ... ", which means he was
getting a lot of ectopic beat.

Q. "0.5 dose of xylocane 2l ... "?

A. 2 per cent.

Q. Is that 2 per cent?

A. Yes.

Q. "Reduced ventricular activity
and bradycardia persisted. More
atropine bicarb seemed to produce
good sinus rhythm with no ventricular
activity. Rate of 70 to 80 but no
increase in the output."

Is there a word there, I don't seem to be able to
read it:

"Rate of 70 to 80 ... "?

A. "Calcium caused no increased
output."

Q. "Caused no increased output."?

A. I think that is what that is.

Q. "Good IV inserted, good volume...
infusing",
and I can't read that word?

A. "Crystalloid".

Q. "Crystalloid", thank you. It
goes on:



R.11

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"Bradycardia with further ventricular ectopics returned. Resistant to Isuprel and atripine. Adrenalin produced some increased or improved heart rate."

A. Yes.

Q. "But no output felt. Sodium bicarb of no value ... "?

A. "Calcium", I think.

Q. Is it calcium, I am sorry.

A. "Calcium of no value. Gradual decline in rate of normal complexes with increased ventricular ectopics. Shock after bicarb adrenalin no response. Further deteriorating bradycardia ... ",

and a word I cannot read:

"ventricular fibrillation"?

A. I don't know what that word is that you are having trouble with.

Q. Nevertheless, the pattern of arrhythmias succeeding each other is pretty clear, isn't it?

A. Yes, it is.

Q. "No response to shock post-adrenalin up to 10 ... ",



F.12

1

2

and I am not sure what the unit is?

3

A. Joules.

4

Q. Joules, thank you.

5

"No response to intracardiac
adrenalin either."?

6

A. No.

7

8

Q. "After 45 minutes when pupils
fixed and dilated 15-20 minutes arrest
gets continued. No ... output ever
since beginning."?

10

11

A. "No spontaneous output."

12

Q. "No spontaneous output ever since
beginning."

13

14

Doctor, when you considered the death
of the Belanger baby, what did you ascribe as the
cause of the death?

15

16

A. I thought that was due to the

17

18

19

complex heart disease in a baby who had had what
appeared to be a reasonably good shunt but you had
other problems that may have produced hypoxic issues
for the baby, particularly the atelectasis and the
general status of the baby in that regard seemed to
me to be compatible with the picture of arrest.

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Q. Well, Doctor, I am certainly not going to be so presumptuous as to challenge your opinion on that, but can you explain one thing for me. Do I understand you to be saying that the problems in the left lung, the collapse in the left lung, could mean that although blood was getting to the lung because of the shunt, the collapse in that lung meant that the blood, having got there, wasn't sufficiently oxygenated anyway?

A. That could be a factor.

Q. All right.

A. That could be happening.

Q. So, it was getting there but the lung was in such a state as not to provide it with a degree of saturation of oxygen that was needed?

A. Yes.

Q. But we do know that the oxygen saturation had been recorded shortly before the child's death, after surgery, a few days, three or four days before death, and hovering between 70 and 80 per cent?

A. Yes.

Q. Which is a very substantial improvement, as you have told us, over what it had been before?



Rowe
dr.ex. (Lamek)

L2

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A. Yes.

3

4

Q. So, there was a shunt that
was open and working?

5

A. Yes.

6

Q. And there had been a
significant increase in the oxygenation of the blood.

7

8

What then was causing these other
conditions that you think may have brought about the
death?

9

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A. Well, I think there are
a number of things that can be involved in the other
conditions aspect of it. I think one of the important
ones is that that sort of baby is always at threat of
further pulmonary disturbance which may tip the
balance. The other is that there was a record in
this baby of having temperature control difficulties,
and that's the sort of thing I mean. The general
status of this baby may be such as to militate in a
number of different directions to just tip the balance.

19

20

21

22

One of the questions that we
weren't sure about was whether this shunt - I remember
Dr. Williams thought it was maybe not big enough, but
there were some questions about it being a bit too
large.

23

24

25

The respirations had increased in



L3

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the latter part of the observations, and I suppose one of the questions that came up, would have come up in the management issue, was whether that might not represent some heart failure, and I think there is some support for that view by the post mortem evidence.

Q. Certainly, the heart was not found to be enlarged at post mortem.

A. There were, however, bilateral pleural profusions and ascites. There were even other things perhaps that might add to the total picture. I am not suggesting any one of these things may have been totally responsible, but I think there was a question of a Di George Syndrome here.

Q. Yes.

It says:

"The finding of a hypoplastic thymus and hypoplastic pair of thyroid glands along with an aortic anomaly is typical of partial Di George Syndrome."

A. And that condition has been known to be associated with sudden death.

So, there were a number of things in this baby's condition that suggested the explanation could be advanced to explain that death.



L4

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Q. Again, I take it, Doctor,

3

that one other cause of death with which the terminal
symptoms would be equally consistent would be digoxin
intoxication?

5

A. Yes.

6

7

Q. Now, this child was not
receiving digoxin. Digoxin had not been prescribed or
added?

8

9

A. No.

10

11

12

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Q. Doctor, we have gone through
approximately 20 deaths in the course of the last
few days, and you have been patient with me, but in
the latter half of 1980, is it not fair to say that
a number of people involved in the Cardiology wards
at one time or another raised the question that one
or another of these deaths may have resulted from, or
may have exhibited signs of digoxin intoxication.

17

18

Have we not seen that in the course
of the review of the deaths that we have looked at?

19

A. That has been raised, yes.

20

Q. But at least raised the
possibility of digoxin toxicity --

21

A. Yes.

22

23

Q. -- in the course of those
six months?

24

25



L5

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A. Yes.

3

Q. But if I understand you,

4

Doctor, when you, at the end of those six months, in

5

preparing for the meeting of January 12, 1981, went

6

back and looked at those deaths and discussed them,

7

and I take it tried to understand why and how those
deaths had occurred?

8

A. Yes.

9

Q. As I understand you, it

10

simply did not occur to you that any of those children

11

might have died because of digoxin poisoning? Do

12

I have your then position clearly in my mind?

13

A. Yes, I think that is

correct.

14

Q. Now, you said last week

15

that in considering those 20 or so deaths for the

16

January 1981 meeting, you considered the possibility

17

that some mismanagement of the patients may have

18

contributed to the high level of ward deaths but, as

19

I recall it, you said that was a possibility that was

20

so remote that you didn't seriously consider it. Is

21

that fairly what you said and what you did at the time?

A. Yes.

22

Q. Now, in thinking of even

23

the remote possibility of mismanagement, what did you

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mean by mismanagement? What does that term encompass?

A. Well, we just wondered whether actions might have been taken. We were particularly concerned about the patients who hadn't yet got to surgery and those who had come back from surgery as to whether we might have handled the matter differently. I don't think we were ever in the position of saying that there was clear evidence of any major mismanagement, disagreement or anything like that. But I think we wanted to look at those patients, and we had a very specific objective to see whether or not anything that we might have done might have helped.



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Q. Well, I'm grateful to you for defining management for me, Dr. Rowe, because it may have a more restrictive meaning than perhaps I would attribute to it. But as I understand it, you are saying did we really plot the course of these children properly or was there something that we were not addressing our minds to. Were we timing the surgery right, were we taking a rational conservative view of things, were we perhaps thinking quickly enough of re-operation. That kind of management decision in other words?

A. Yes.

Q. And the question of mismanagement did not get down then I take it to the day to day maintenance and handling and dealing with the patients in their sort of moment to moment needs and wants and so on?

A. No.

Q. Did the possibility of some breakdown at that level occur to you?

A. That didn't occur to me because I get reported to by the staff cardiologists. They are all senior people, they are all capable of making judgments on that score and I expect that they would, if they had any concerns about minutia



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that might not have become evident on broad strokes
of the review.

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Q. Yes. Now, in the early part
of January, 1981, you were looking back over a
six month period in which there had been, as you
say some 20 deaths, and the very number was the
cause for the exercise, was it not?

9

A. Yes.

10

11

Q. The exercise is being
carried on because that was an unusually high number?

12

13

14

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16

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Q. And in looking back over
those deaths, did it come to your attention, did you
recall that in the case of David Taylor the possi-
bility of digoxin toxicity had been discussed at
the very first Mortaility and Morbidity Review
meetings in September. Did you recall that?

18

19

20

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A. No, I didn't recall that.

Q. Did you observe in Brian Gage's
chart that on the last day of his life he had a
level of digoxin in his blood of 3.5 nanograms per
millilitre; not grossly elevated but elevated to the
point that you would regard as a warning signal.
Did you observe that in reviewing these deaths in
preparation for the meeting?



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A. I think that we had dealt with that matter or that matter had been dealt with at the time of the morning conferences.

Q. Doctor, it may have, but what I am suggesting to you is that the morning conferences deal with deaths one at a time?

A. Yes.

Q. In January, you were looking at deaths 20 at a time?

A. Yes.

Q. And if enough straws blow in the wind, and I'm not suggesting that they did, but if enough blow in the wind, looking at them 20 at a time you may see a different perspective than when you look at them one at a time, may you not?

A. It's true.

Q. Yes. So, although that may well have been a matter for discussion at the daily meeting on the ward at the time Brian Gage died, was it something that came to your mind when reviewing the whole series of deaths?

A. I think in the patients who were under intensive therapy for severe disease, we don't consider levels of the sort that we



1
2 discussed in those individual patients as being the
3 likely explanation for death. I think that's the
4 position we would adopt. We would not consider that
5 as a major issue because it's a very common one
6 and we would say that's within the grounds of
7 therapeutic use of the drug and of not major concern
8 because we have seen a lot of babies with this
9 condition.

10 Q. Oh, I know you have.

11 A. And we don't get as uptight
12 about a digoxin level as other people seem to do,
13 including some of the residents.

14 Q. Well, Doctor, I want to come
15 back to that answer, but is the answer to the question
16 that I asked you, no, you did not have that incident
17 in the Gage file present in your mind at the time you
18 did this review in January, 1981?

19 A. I don't think that we had
20 a list and struck that off the list, I think we
21 just remembered the situation and said this baby
22 had severe congestive failure and was treated
23 appropriately and we didn't think that there was
24 anything of note in that record.

25 Q. Now, Doctor, I hear what you
are saying and, believe me, I think I understand it,



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that you see a lot of babies, you see a lot of
very sick babies, you see a lot of babies where
tough minded treatment is necessary, I understand
that.

6

A. Yes.

7

Q. And you see a lot of deaths.

8

But now you are looking at a case where there had
been 20 deaths on your ward in six months.

9

A. Yes.

10

Q. And that is not a usual

11

situation, is it?

12

A. No, it isn't.

13

Q. Was it present to your mind

14

in the early part of January, 1981 that Richard

15

McKeil on the last day of his life had a level of

16

digoxin in his blood which was not known but was at
least known to be greater than 4.7 nanograms?

17

A. Yes. Well, we know of course

18

that he had a level of almost that beforehand.

19

Q. Well, he had had 3 point

20

something before and he had a 4.6, but this was the
day he died. Was that present in your mind?

21

A. Well, I think we just included

22

all that in our thinking. I can't remember the

23

exact process I went through in January to review

24

25

1
2 every death but I can tell you that we would have
3 included all that information in looking at it. I
4 can only say again that if we have digoxin levels
5 that are mildly elevated like that, we are not
6 going to get unduly upset.

7 Q. With respect, Doctor, you
8 don't know how mildly elevated Richard McKeil's
9 digoxin level was, do you?

10 A. No, we don't know for sure.

11 Q. You don't know. It may have
12 been grossly elevated for all that you knew?

13 A. Well, I don't know.

14 Q. You don't know.

15 A. I only knew it was more than
16 4 point something.

17 Q. That is right, and how much
18 more you did not know?

19 A. No.

20 Q. And, therefore, to regard
21 that as a mildly elevated digoxin level is, with
22 respect, to reach a conclusion for which the factual
23 basis is not present, isn't it?

24 A. Not entirely because I believe
25 that his level of 4.6 before that was what most
people would regard as terribly high and he had no



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Rowe, dr.ex.
(Lamek)

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toxic effects at that time.

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Q. You're not telling me that
this is nearly .1 of a nanogram more than that, it
could be 10 nanograms?

5

6

A. I don't know what it was.

7

Q. It was more than 4.7?

8

A. I don't know what the level
would have been.

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Q. And indeed the others of which stated in the chart may be merely symptoms themselves of digoxin toxicity, as we said yesterday.

A. Yes.

Q. Doctor, does it not appear that during the latter half of 1980 a number of people involved in the cardiology wards contemplated that one time or another that one or more of these deaths may have had some digoxin toxicity involvement?

A. Yes.

Q. And when you were putting them altogether for the purpose of preparing for the meeting of January 12th, 1981 that possibility either did not occur to you or was rejected by you, I take it?

A. Yes.

Q. Which one was it?

A. I think rejected, probably.

Q. Going back to the question of possibility of mismanagement, Doctor, I do not suggest for a moment that in January of 1981 you would or should entertain the abhorrent thought that somebody might be deliberately administering improperly drugs to your patients, I would not suggest that to you. But did you not consider the possibility that errors may have been made either in the



1
2 calculation or in the administration of drugs,
3 digoxin or anything else, and that that may have
4 in some way been contributing to the level of deaths
5 that you had been seeing and about which you were
6 concerned?

7 A. The way that we dealt with
8 that issue is that the cardiologist's job on the
9 floor is to check the amount of digoxin that is
10 ordered and to make sure that the doses are being
11 given, through nursing, and that is a function of
12 a cardiologist when they are reviewing a death.
13 So I would have expected, if there had been concern
14 from cardiologists in the process of these deaths
15 about the matter of the administration of digoxin,
16 they would have raised it. Of course they would
not be able to anticipate sinister issues.

17 Q. Of course not.

18 A. But in the ordinary course
of events that is the function of the cardiologist.

19 Q. Doctor, in the best devised
20 and run systems, errors can occur and indeed I put
21 it to you errors can occur in clusters, can they not?

22 A. I expect so, I don't know.

23 Q. Perhaps when we come back
24 next week I will put something to you, but do you
25



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not recall that in the late summer of 1980 there
was a cluster of four or five errors in digoxin
administration on the cardiology wards?

3

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A. Yes, but not major errors.

6

Q. Whether they were major or
not, errors can occur?

7

8

A. Oh, yes.

9

Q. No system is immune from
them?

10

11

A. No.

12

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Q. Doctor, I understand, and
I sympathize with the puzzlement there must have
been about this whole situation, next week we will
be talking about the balance of the deaths and the
reviews that you made of those and such reconsidera-
tion as you may have given to some of these earlier
deaths. Could you just tell us now so that we might
understand, Doctor, when you next conducted a review
of the cardiology ward deaths?

19

20

A. We did not have the review
until the end of March.

21

Q. Until the end of March?

22

A. Yes. We did not have an
official review.

23

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Q. You would have the daily



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cardiology meetings of course?

A. Yes, and the pathology people had theirs and the surgical people had theirs.

Q. But at the end of March there was a review that was designed to look at this block of deaths that had occurred and ---

A. We did not have an official divisional review. That was when the events broke in March; there was a need to obviously review everything.

Q. That was, I take it, after March 22nd or March 25th?

A. Yes, that is right.

Q. Did you at any later stage review either the 1981, the first quarter of 1981 ward deaths and/or the second half of 1980 deaths? Did you at a later stage go back and look at the whole sweep of these things?

A. Yes, we had done that.

Q. When did you do that?

A. We have done that within the division. I'm not sure of the exact time but it was subsequent to that period.

Q. Maybe what we can do next week, Doctor, is look at the assessments that you made of the January, February, March deaths and



1
2 any subsequent review that you made, and your
3 present view of all of those deaths in the long
4 sweep?

5 A. Yes.

6 MR. LAMEK: Thank you very much.

7 THE COMMISSIONER: Thank you,
8 Doctor. Mr. Lamek, have we any more of the ---

9 MR. LAMEK: Oh, could I just ask
10 you to stay for a moment, Doctor - precisely that.
11 I had them brought over so that counsel may pick up
12 copies of the further charts either tomorrow or
Monday.

13 I am going to ask you, Doctor, to
14 do that identification for me if you would.

15 Then, Mr. Commissioner, if I may,
16 we have to resolve definitively what is happening
about sitting next week, if that is all ---

17 THE COMMISSIONER: I thought you
18 had bullied me into starting on Tuesday.

19 MR. LAMEK: I could not believe I
20 had been so successful with just one short submission.
21 Starting on Tuesday, that is terrific. Thank you,
22 sir.

23 THE COMMISSIONER: All right.

24 MR. LAMEK: Q. Dr. Rowe, I'm
25



1
2 showing you what I think to be a copy of the
3 Hospital's record for Janice Estrella, and ask you
4 if you recognize that, please?

5 A. That is the record of Janice
6 Estrella.

7 MR. LAMEK: Thank you.

8 THE COMMISSIONER: Exhibit 91.

9 ---EXHIBIT NO. 91: Medical records of Janice
10 Estrella.

11 MR. LAMEK: Q. Next, Dr. Rowe, a
12 copy of the medical records of Baby Fazio.

13 A. That is the record of Frank
14 Fazio.

15 MR. LAMEK: Thank you.

16 THE COMMISSIONER: Exhibit 92.

17 ---EXHIBIT NO. 92: Medical records of Frank
18 Fazio.

19 MR. LAMEK: Q. And next, the chart
20 of Bruce Floryn.

21 A. That is the chart of Bruce
22 Floryn.

23 MR. LAMEK: Thank you.

24 THE COMMISSIONER: Exhibit 93.
25



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3 ---EXHIBIT NO. 93: Medical Records of Bruce
4 Floryn.

5 MR. LAMEK: Q. And last, for the
6 moment, a copy of the chart of Jennifer Thomas.

7 A. This is a copy of the chart
8 of Jennifer Thomas.

9 MR. LAMEK: Thank you, sir.

10 THE COMMISSIONER: Exhibit 94.

11 ---EXHIBIT NO. 94: Medical Records of Jennifer
12 Thomas.

13 THE COMMISSIONER: I take it the
14 rest are not available?

15 MR. LAMEK: Just the volume of
16 them was too much for today.

17 THE COMMISSIONER: All right.

18 MR. LAMEK: And Mr. Commissioner,
19 copies of those charts will be available at
20 counsel for the Commission's Offices and may be
21 picked up tomorrow or Monday in preparation for
22 the resumption of Dr. Rowe's evidence on Tuesday.

23 THE COMMISSIONER: Yes. I do not
24 think it is really your task, but some of these -
25 if I can use the terrible word, pagenations - are
done extremely well but some of them are not done
at all.



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MR. LAMEK: I know, Mr. Commissioner,
it is a problem. Unhappily, the larger the task,
the more difficult the quality control.

THE COMMISSIONER: Whoever is over-
looking our student labour can take that up with them.
Nothing else then, I take it?

MR. LAMEK: Not for me,
Mr. Commissioner, thank you.

THE COMMISSIONER: Tuesday at
10 o'clock.

MR. LAMEK: Thank you, Doctor.

---Whereupon the hearing adjourned at 1:00 p.m.
until Tuesday, July 26th, 1983 at 10:00 a.m.

